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#### PARTITION COEFFICIENTS AND THEIR USES

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#### I. Introduction

#### A. PURPOSE

In spite of the scientific community's continuing interest over the past 90 years in partitioning measurements, no comprehensive review of the subject has ever been published. In fact, no extensive list of partition coefficients has appeared in the literature. The largest compilation is that of Seidell; smaller compilations have been made by Collander, so Metzsch, and Landolt. The task of making a complete listing is nearly

impossible since Chemical Abstracts has not indexed the majority of the work of the last few decades under the subject of partitioning. While reference may be made under the name of a compound, this is of very little help in organizing a list of known values. Actually, in recent years relatively few partition coefficients have been determined in studies simply devoted to an understanding of the nature of the partition coefficient. The vast majority have been measured for some secondary reason such as the correlation of relative lipophilic character with biological properties of a set of congeners.

In the course of structure-activity studies undertaken by this laboratory over the past decade, many values for partition coefficients of drugs have been found in the biochemical and pharmaceutical literature. From references in these papers, many other values have come to light. As these values have been uncovered, they have been fed into a computer-based "keyed-retrieval" compilation which, while admittedly not complete, is still far more comprehensive than any yet published

This compilation is not the primary reason for the present review. Work<sup>8</sup> on the correlation of hydrophobic bonding in biochemical systems with partition coefficients has been greatly hindered because of the lack of any survey of the field. This review is written in the hope that the organization of the scattered works on this subject will be of help to others. However, the more dynamic part of the subject is the use of the partition coefficient in the study of intermolecular forces of organic compounds. This subject, while still in the embryonic stage, holds promise for the better understanding of the interaction of small organic molecules with biomacromolecules. Equation 1 is one of many known examples<sup>9</sup> of a

$$\log \frac{1}{C} = 0.75 \log P + 2.30 \qquad {n \choose 42} \quad 0.960 \quad 0.159 \quad (1)$$

linear free energy relationship relating two "partitioning-like" processes. In eq 1, C is the molar concentration of organic compound necessary to produce a 1:1 complex with bovine serum albumin via equilibrium dialysis. This partitioning process is related linearly to  $\log P$  which is the partition coefficient of the compound between octanol and water. The number of molecules studied is represented by n, r is the cor-

<sup>(1)</sup> A. Seidell, "Solubility of Organic Compounds," Vol. II, 3rd ed, Van Nostrand, Princeton, N. J., 1941.

<sup>(2)</sup> R. Collander, Physiol. Plant., 7, 420 (1954).

<sup>(3)</sup> R. Collander, Acta Chem. Scand., 3, 717 (1949).

<sup>(4)</sup> R. Collander, ibid., 4, 1085 (1950).

<sup>(5)</sup> R. Collander, ibid., 5, 774 (1951).

<sup>(6)</sup> F. von Metzsch, Angew. Chem., 65, 586 (1953).

<sup>(7)</sup> Landolt-Bornstein, "Zahlenwerte and Functionen," Vol. 2, Springer-Verlag, Berlin, 1964, p 698.

<sup>(8)</sup> C. Hansch, Accounts Chem. Res., 2, 232 (1969).

<sup>(9)</sup> F. Helmer, K. Kiehs, and C. Hansch, Blochemistry, 7, 2858 (1968).

relation coefficient, and s is the standard deviation from regression. Many such linear relationships between solutes partitioned in different solvent systems have been uncovered (section IV). A summary of this work should provide a better understanding of the octanol-water model system and further the application of such linear free energy relationships to "partitioning-like" processes in more complex biological systems.

Another aspect of this review is to summarize the present understanding of the recently discovered 10 additive-constitutive character of the partition coefficient. This property promises to be of value in studying the conformation of molecules in solution.

#### **B. HISTORICAL**

The distribution of a solute between two phases in which it is soluble has been an important subject for experimentation and study for many years. In one form or another this technique has been used since earliest times to isolate natural products such as the essences of flowers.

The first systematic study of distribution between two immiscible liquids which led to a theory with predictive capabilities was carried out by Berthelot and Jungfleisch. 11 These investigators accurately measured the amounts present at equilibrium of both I2 and Br2 when distributed between CS<sub>2</sub> and water. They also measured the amounts of various organic acids, H2SO4, HCl, and NH3 when distributed between ethyl ether and water. From these early investigations came the first appreciation of the basic fact that the ratio of the concentrations of solute distributed between two immiscible solvents was a constant and did not depend on the relative volumes of solutions used.

It was concluded from these early observations that there was a small variation in partition coefficient with temperature, with the more volatile solvent being favored by a temperature decrease. It was also evident that some systems, notably succinic acid partitioned between ether and water, did not obey their simple "rule" even in dilute solution, but they intuitively felt the rule would be justified nonetheless.

In 1891, Nernst made the next significant contribution to the subject. 12 He stressed the fact that the partition coefficient would be constant only if a single molecular species were being considered as partitioned between the two phases. Considered in this light, partitioning could be treated by classical thermodynamics as an equilibrium process where the tendency of any single molecular species of solute to leave one solvent and enter another would be a measure of its activity in that solvent and would be related in the usual fashion to the other commonly measured activity functions such as partial pressure, osmotic pressure, and chemical potential. As the primary example of a more exact expression of the "Partition Law," it was shown that benzoic acid distributed itself between benzene and water so that

$$\sqrt{C_s}/C_w = K \tag{2}$$

where  $C_a$  is the concentration of benzoic acid in benzene (chiefly in dimeric form),  $C_{\rm w}$  is the concentration of benzoic acid in water, and K is a constant combining the partition coefficient for the benzoic acid monomer and the dimerization constant for the acid in benzene. 18 Since benzoic acid exists largely as the dimer in benzene at the concentration employed, the monomer concentration in benzene is proportional to the square root of its total concentration in that solvent. Of course, Nernst was also aware that, at low concentrations, the concentration of benzoic acid in the aqueous phase would have to be corrected for ionization.

This association and dissociation of solutes in different phases remains the most vexing problem in studying partition coefficients. For a true partition coefficient, one must consider the same species in each phase. A precise definition of this in the strictest sense is impossible. Since water molecules and solvent molecules will form bonds of varying degrees of firmness with different solutes, any system more complex than rare gases in hydrocarbons and water becomes impossible to define sharply at the molecular level. Very little attention has been given to the fact that solutes other than carboxylic acids may carry one or more water molecules bound to them into the nonaqueous phase. This is quite possible in solvents such as sec-butyl alcohol which on a molar basis contains more molecules of water in the butanol phase than butanol!

During the early years of the twentieth century a great number of careful partition experiments were reported in the literature, most of which were carried out with the objective of determining the ionization constant in an aqueous medium of moderately ionized acids and bases. As a point of historical fact, the method did not live up to its early promise, partly because of unexpected association in the organic solvents chosen and partly because of solvent changes which will be discussed in detail in a following section.

After reliable ionization constants became available through other means, partitioning measurements were used to calculate the association constants of organic acids in the nonaqueous phase as a function of the temperature. This yielded values of  $\Delta H$ ,  $\Delta S$ , and  $\Delta G$  for the association reaction. 14-18 However, any calculation of self-association constants from partition data alone can be misleading when hydrate formation occurs. 19, 20

As early as 1909, Herz<sup>21</sup> published formulas which related the partition coefficient (P) to the number of extractions necessary to remove a given weight of solute from solution. His formula, with symbols changed to conform to present usage, is as follows.

If W ml of solution contains  $x_0$  g of solute, repeatedly extracted with L ml of a solvent, and  $x_1$  g of solute remains after the first extraction, then  $(x_0 - x_1)/L = \text{concentra-}$ tion of solute in extracting phase and  $x_1/W = \text{concentration}$ remaining in original solution.

<sup>(10)</sup> T. Fujita, J. Iwasa, and C. Hansch, J. Amer. Chem. Soc., 86, 5175 (1964).

<sup>(11)</sup> Berthelot and Jungfleisch, Ann. Chim. Phys., 4, 26 (1872).

<sup>(12)</sup> W. Nernst, Z. Phys. Chem., 8, 110 (1891).

<sup>(13)</sup> Occasionally, K values obtained in this fashion have been reported as "partition coefficients." In this report all such values have been corrected to true P values whenever the different terminology was

<sup>(14)</sup> M. Davies, P. Jones, D. Patnaik, and E. Moelwyn-Hughes, J. Chem. Soc., 1249 (1951).

<sup>(15)</sup> J. Banewicz, C. Reed, and M. Levitch, J. Amer. Chem. Soc., 79, 2693 (1957). (16) M. Davies and D. Griffiths, Z. Phys. Chem. (Frankfurt am Main), 2, 353 (1954).

<sup>(17)</sup> M. Davies and D. Griffiths, J. Chem. Soc., 132 (1955).

<sup>(18)</sup> E. Schrier, M. Pottle, and H. Scheraga, J. Amer. Chem. Soc., 86, 3444 (1964).

<sup>(20)</sup> R. Van Duyne, S. Taylor, S. Christian, and H. Affsprung, J. Phys. Chem., 71, 3427 (1967).

<sup>(21)</sup> W. Herz, "Der Verteilungssatz," Ferdinand Enke, Stuttgart, 1909, p 5.

$$P = \frac{x_1}{W} / \frac{x_0 - x_1}{L}$$
$$x_1 = x_0 \frac{PW}{PW + L}$$

If  $x_2$  is the amount of solute remaining after the second extraction with an equal volume, L, of extractant, then

$$x_2 = x_1 \frac{PW}{PW + L} = x_0 \left[ \frac{PW}{PW + L} \right]^2$$
 (3)

For the general case where n extractions are made, eq 3 takes the general form

$$x_n = x_0 \left[ \frac{PW}{PW + L} \right]^n \tag{4}$$

During the 1940's the mechanical technique of multiple extraction was vastly improved, and countercurrent distribution became an established tool for both the separation and characterization of complex mixtures. 22 It is beyond the scope of this review to deal with the great wealth of literature on this subject. The interested reader may consult the reviews for details. 22, 23

Partition coefficients can be obtained from countercurrent distribution studies and many such values appear in Table XVII. The equation used for such studies is

$$T_{n,r} = \frac{n!}{r!(n-r)!} \left(\frac{1}{P+1}\right)^n (P)^r \tag{5}$$

where  $T_{n,r}$  represents the fraction of the total material in the r tube distributed through n tubes.<sup>24</sup> For distributions involving more than 20 transfers and when P is near unity, the following simpler relationship applies

$$N = n \left( \frac{P}{P+1} \right) \tag{6}$$

where N = position of peak, n = number of transfers, and P = position of peakpartition coefficient.

During the two decades bracketing the turn of the century, while the partition coefficient was being studied by physical chemists as an end in itself, pharmacologists became quite interested in the partition coefficient through the work of Meyer<sup>25</sup> and Overton<sup>26</sup> who showed that the relative narcotic activities of drugs often paralleled their oil/water partition coefficients. However, the correlation of so-called nonspecific narcotic activity with partition coefficients did not lead to any really useful generalizations in understanding the mechanism of drug action in the broad sense. Consequently, the interest of both groups in partition coefficients declined greatly. In fact, even the exciting technique of countercurrent distribution did little to stimulate serious studies of partition coefficients per se. It is only the recent use of partition coefficients as extrathermodynamic reference parameters for "hydrophobic bonding" in biochemical and pharmacological systems which generated renewed interest in their measurement. 8,8

The symbols and nomenclature associated with partitioning processes have varied considerably. Before the turn of the century, the term "distribution ratio" was often used. Gradually, partition coefficient has become more widely used since Chemical Abstracts has indexed under this heading rather than distribution ratio. We shall use partition coefficient when referring to data which have been corrected for ionization, dimerization, etc., so that one is presumably referring to the distribution of a single species between two phases. It is appreciated that there is considerable uncertainty about the nature of "hydrate formation," and attempts to correct partition coefficients for the relative degree of specific association with water molecules or solvent molecules are very few. The expression "partition ratio" should be reserved to refer to uncorrected distributions of solute between two phases. Various symbols such as K, KD, KP, D, and P have been used to represent the partition coefficient. We have chosen to use P partly because it has become more widely used in recent years than other symbols and because discussions with P very often involve many other equilibrium constants. P stands out from the variety of K values and is more easily followed in discussions, especially since this symbol is used sparingly in the literature pertaining to physical organic chemistry.

#### II. Theoretical

#### A. HENRY'S LAW

The most general approach to distribution phenomena is to treat the Partition law as an extension of Henry's law. For a gas in equilibrium with its solution in some solvent

$$m/p = K (7)$$

where m = mass of gas dissolved per unit volume and p =pressure at constant temperature. Since the concentration of molecules in the gaseous phase is proportional to pressure, p can be replaced by  $C_1$  and the mass/unit volume of gas in solution designated by  $C_2$ . Equation 7 can then be restated as

$$C_2/C_1 = K (8)$$

In the most general terms, then, the concentrations of any singular molecular species in two phases which are in equilibrium with one another will bear a constant ratio to each other as long as the activity coefficients remain relatively constant. The "catch" to the above simple definition is that it assumes no significant solute-solute interactions as well as no strong specific solute-solvent interactions.

Many large interesting organic compounds deviate considerably from ideal behavior in water and various solvents so that one is not always even reasonably sure of the exact nature of the molecular species undergoing partitioning.

#### B. NONIDEAL BEHAVIOR OF SOLUTES

In many instances solute molecules can exist in different forms in the two phases. This problem can be illustrated with the relatively simple and well-studied case of ammonia.

$$\begin{array}{c}
NH_3(vapor) \\
\hline
\\
-1/_2(NH_3)_2 \longrightarrow NH_3 \longrightarrow NH_4^+ OH^-
\end{array}$$

In this example, Henry's law is not obeyed, and there is wide variation of m/p (or  $C_2/C_1$ ) with concentration. Calingaert and

<sup>(22)</sup> L. C. Craig and D. Craig in "Technique of Organic Chemistry," Vol. III, Part I, A. Weissberger, Ed., Interscience, New York, N. Y., 1950, p 171.

<sup>(23)</sup> L. C. Craig, Bull. N. Y. Acad, Med., 39, 686 (1963).

<sup>(24)</sup> B. Williamson and L. Craig, J. Biol. Chem., 168, 687 (1947).

<sup>(25)</sup> H. Meyer, Arch. Exptl. Pathol. Pharmakol., 42, 110 (1899).

<sup>(26)</sup> E. Overton, "Studien uber die Narkose," Fischer, Jena, Germany, 1901.

Huggins<sup>27</sup> considered the ionization equilibrium and found that  $C_2/[C_1(1-\alpha)] \cong K$ ; the degree of ionization is represented by  $\alpha$ , and K was found to be constant to within 3 % over a 300-fold range of concentrations. Moelwyn-Hughes<sup>28</sup> points out that if one allows for both ionization and dimerization assigning a value of K = 3.02 mol/l. for the equilibrium constant for the reaction 2(NH<sub>3</sub>)  $\rightleftharpoons$  (NH<sub>3</sub>)<sub>2</sub>, then a constant partition ratio is obtained for concentrations up to 1.6 M.

The equation allowing for both dimerization and ionization can be cast in several forms and the choice is merely one of convenience in handling the data. In treating their data on the distribution of acids between water and toluene, benzene, or chloroform, Smith and White29 assigned the following symbols in developing a useful set of equations.

 $C_1$  = concentration of total solute in aqueous phase in mol/l.

 $C_1$  = concentration of total solute in organic phase in mol/l. (in terms of monomer molarity)

X = concentration of ions in aqueous phase  $N = C_1 - X_1 = \text{concentration of un-ionized molecules in water}$ 

at the first concentration level  $C_1' - X_1' = \text{concentration of un-ionized molecules in}$ water at the second level

P = concentration single molecules in organic phase/concentration single molecules in aqueous phase

 $K_D$  = dissociation constant of double into single molecules in organic phase

dissociation constant of single molecules into ions in aqueous layer

For aqueous equilibrium

$$K_{A} = X^{2}/(C_{1} - X)$$

$$HA \longrightarrow H^{+} + A^{-}$$

$$(X) (X)$$

and

$$X = \frac{-K_{A} + \sqrt{K_{A}^{2} + 4K_{A}C_{1}}}{2}$$
 (9)

For equilibrium in the organic phase<sup>30</sup>

$$K_{\rm D} = \frac{2(P[C_1 - X_1])^2}{C_2 - P(C_1 - X_1)} = \frac{2(PN)^2}{C_2 - PN} = \frac{2(Pn)^2}{C_2' - Pn} \quad (10)$$

$$P = \frac{C_2 \dot{n}^2 - C_2' N^2}{(n - N)nN} \tag{11}$$

It is readily apparent that any set of experimental values of  $C_1$ and C<sub>2</sub> are apt to have one or more aberrant points, and, furthermore, it is not always apparent how high a concentration must be reached before other solvent effects introduce sizable errors into the relationship which assumes a constancy for the two phases. For this reason it is advisable to recast eq 10 in another form.

$$K_{\rm D} = 2(PN)^2/(C_2 - PN)$$

which is equivalent to

$$K_{\rm D}(C_2-PN)=2(PN)^2$$

Multiplying by  $1/K_DN^2$  and rearranging, we obtain

$$C_2/N^2 = P(1/N) + \text{constant}$$
  
 $\text{constant} = 2P^2/K_D$  (12)

It is evident that a plot of  $(C_2/N^2)$  vs. 1/N will yield a straight line with slope = P. If there are sufficient data points, any aberrant values will be apparent, and the concentration beyond which the linear relationship no longer holds is more

A good deal of the data on acids in the literature had never been treated in this manner. To make these calculations from data which recorded a range of total concentrations in each phase (regardless of whether present as dimer, ion, etc.), we have written a small computer program to calculate 1/N and  $C_2/N^2$  for each concentration value and P for each consecutive set of two concentrations. The program also punches a set of cards with  $C_2/N^2$  and 1/N values which can then be used with a regression program to eliminate aberrant values and values beyond the true linear relationship. Whenever possible, the P values in Table XVII have been calculated in this way and 95% confidence intervals have been placed on them. P values so obtained were used to calculate  $K_D$  values in Table II.

A slightly altered form of eq 12 has also been widely used. 14,31 Stated in terms of the above symbols, it is

$$\frac{C_2}{N} = P + \frac{2P^2}{K_D}N\tag{13}$$

In this form a plot of N vs. 1/N yields the value of P from the intercept (the partition coefficient at zero concentration where dimerization can be ignored). The value of the dimer dissociation constant can be obtained from P and the slope. It is obvious that dividing both sides of eq 13 by N yields an equation of the form of eq 12 and thus a given set of data should yield the same values for P and  $K_D$  by either method of calculation. We prefer to use the Smith and White equations, especially where no data points were measured at low concentrations and where, therefore, there can be a wider 95% confidence interval in the intercept value as compared to the confidence interval on the slope.

In calculating partition coefficients or association constants of acids, one is of course quite dependent on the quality of equilibrium constants available. For example, Moelwyn-Hughes,32 in reviewing data reported by Rothmund and Drucker, 33 assumed no dimerization of picric acid in benzene and obtained a value of 0.143 for the ionization constant of picric acid in water. If, on the other hand, we accept the value of 0.222 for the KA of picric acid as determined by conductivity measurements34 and recalculate Rothmund and Drucker's data, a P value of 48.77 is found instead of 31.78. The  $K_D$ value, as calculated by eq 12, is very nearly infinity; i.e., there is very little association in the benzene phase. This is a departure from the behavior of unsubstituted phenols in benzene. Endo<sup>35</sup> used partitioning data to show that the dissociation constant for the phenol trimer in benzene is approximately 1.

Ionization and self-association are not the only fates which can befall the carboxylic acid monomer (or other polar molecules) and complicate the calculation of the true partition coefficient and association constant. 19, 20 If the solute forms a

<sup>(27)</sup> G. Calingaert and F. Huggins, Jr., J. Amer. Chem. Soc., 45, 915 (1923).

<sup>(28)</sup> E. A. Moelwyn-Hughes, "Physical Chemistry," 2nd ed, Pergamon Press, New York, N. Y., 1961, p 1085.

<sup>(29)</sup> H. Smith and T. White, J. Phys. Chem., 33, 1953 (1929).

<sup>(30)</sup> In eq 10, Smith and White omitted 2 in the numerator.

<sup>(31)</sup> Reference 28, p 1081.

<sup>(32)</sup> Reference 28, p 1082.

<sup>(33)</sup> V. Rothmund and K. Drucker, Z. Phys. Chem., 46, 827 (1903).

<sup>(34)</sup> J. Dippy, S. Hughes, and L. Laxton, J. Chem. Soc., 2995 (1956).

<sup>(35)</sup> K. Endo, Bull. Chem. Soc. Jap., 1, 25 (1926).

firmly bonded hydrate, there is another set of equilibria to worry about in the organic phase. In order to best explain variation of P with concentration in the system of benzoic acid distributed between benzene and water, it was proposed 20 that three hydrates are present in the benzene. By a rather complex

curve-fitting technique using solubility data of water in benzene and benzoic acid in benzene, equilibrium constants for the three types of hydrates were estimated. In Table I the associa-

Table I Hydration and Dimerization of Benzoic Acid in Benzene

	Temp, C°	$K_{\mathrm{D}}$	P
Van Duyne, et al.20			
Method A	25	589	0.95
Method B	25	298	1.31
Schilow and Lepin <sup>36</sup>	23.5	109	2.30
Smith <sup>87</sup>	25	260ª	1.63
Huq and Lodhi <sup>28</sup>	25	244	1.56
Hendrixson <sup>39</sup>	10	?	1.43
Hendrixson <sup>29</sup>	40	?	2.10

<sup>&</sup>lt;sup>a</sup> An average of six different determinations.

tion constants and partition coefficients for benzoic acid in benzene are given, and the results assuming hydrate formation are compared with results neglecting it. It is evident from Table I that the calculations which take hydrate formation into account affect the partition coefficient as well as the dimerization constant. However, if method B20 is accepted, it does not yield values far out of line from those determined by other investigators.

Although preferred by Van Duyne, et al., method A is open to criticism for it assumes that the dimerization constant  $(K_{20}$  in their paper) is the same in dry benzene as in "wet." Completely apart from any tendency to encourage hydrate formation, the addition of water to benzene could be expected to increase the dielectric constant and by this means alone should lower  $K_D$  (association). 19,40 However, it must be admitted that there is evidence which supports a lesser or negligible role for a change from a "dry" to a wet organic solvent.14

In Table II are listed a number of association constants for carboxylic acids in various solvents calculated according to the

Not much in the way of useful generalizations can be made from the data in Table II. It is of interest that there is a general trend of the degree of dimerization by solvents: toluene > benzene > chloroform >> ether. The fact that benzene values are lower than toluene is likely due to the greater solubility of water in benzene. In fact, the solubility of water in the organic solvent as seen from Table VIII is in inverse order to the degree of dimerization, water being most soluble in ether and least soluble in toluene.

Considering a single solvent, toluene, the dimerization constant appears to increase with the size of the alkyl group, at least up through valeric acid. This effect seems to correlate most closely with Taft's steric parameter, Es. While eq 14 is

$$\log P_{\text{assoo}} = -0.470(\pm 0.32)E_{\text{s}} + 1.989(\pm 0.20)$$
 (14)  

$$\begin{array}{ccc} n & r & s \\ 8 & 0.824 & 0.223 \end{array}$$

quite significant statistically  $(F_{1,6} = 12.6)$ , the correlation is not very high. It does suggest, however, that the steric effect of the alkyl moiety of the acid is most important. Adding a term in  $pK_a$  to eq 14 does not improve the correlation. One cannot place a great deal of confidence in eq 14 since there is considerable overlap between the two parameters,  $pK_a$  and  $E_s$ , for the set of acids under consideration ( $r^2 = 0.834$ ). Equation 14 does suggest that the large alkyl groups might inhibit hydrate formation and in this way favor dimerization.

There is little trend to be seen in the scattered group of halo fatty acids and substituted benzoic acids, but the statement 40 that the more highly chlorinated acids are more highly associated does not seem supported.

In the development of eq 12 and 13 it was assumed that association in the organic phase proceeded no further than the dimer stage. For the case of acetic acid in the benzene-water system, it has been shown<sup>16</sup> that neither partition coefficient nor the dimerization constant values calculated from this type of expression would be markedly altered if some trimer or tetramer were also formed. These authors calculated  $K_{1-3}$  to be  $2.35 \times 10^{-4}$ , but suggest that this might well be viewed as a correction in the dimerization equilibrium constant and therefore not have any real molecular significance.

While there is little or no evidence for association beyond the dimer state for low molecular weight carboxylic acids, other types of solutes have a greater associative tendency. For instance, a sudden increase in P\*50 (apparent partition coeffi-

method discussed above. Sometimes  $K_{assoc}$  was found to vary with concentration at levels below  $5 \times 10^{-3} M$ , and in these cases the constant value at higher concentrations was chosen. The variation at the lower concentrations may be more a function of the analytical techniques employed in measurement rather than a meaningful physical phenomenon, although this is by no means completely clear from the data. One must keep the arguments of Van Duyne, et al., 20 in mind when considering these constants. If hydrate formation is always involved with carboxylic acids in solvents such as benzene, then the association constants of Table II will generally be too low.

<sup>(36)</sup> N. Schilow and L. Lepin, Z. Phys. Chem., 101, 353 (1922).

<sup>(37)</sup> H. W. Smith, J. Phys. Chem., 26, 256 (1922).

<sup>(38)</sup> A. K. M. S. Huq and S. A. K. Lodhi, ibid., 70, 1354 (1966).

<sup>(39)</sup> W. S. Hendrixson, Z. Anorg. Chem., 13, 73 (1897).

<sup>(40)</sup> C. Brown and A. Mathieson, J. Phys. Chem., 58, 1057 (1954).

<sup>(41)</sup> N. A. Kolossowsky and I. Megenine, Bull. Soc. Chim. Fr., 51, 1000 (1932).

<sup>(42)</sup> W. Herz and H. Fischer, Chem. Ber., 38, 1138 (1905).

<sup>(43)</sup> N. A. Kolossowsky and S. F. Kulikov, Z. Phys. Chem., A169, 459 (1934).

<sup>(44)</sup> F. S. Brown and C. R. Bury, J. Chem. Soc., 123, 2430 (1923).

Table II Association Constants of Acids

			_						
Acid	~_Toli		Benz	zene——	~CH	Cl <sub>8</sub> ——	ν	Other solvent	n.c
Aciu	Kassoo	Ref	K <sub>85806</sub>	Ref	K <sub>25800</sub>	Ref	Kassoo	Other solveni	Ref
1. Formic	29	41	121°	45	26	45	0.6	Nitrobenzene	48
				45					
2. Acetic	42	42	28	42	60	45	43	CC1.	45
							0	Ether	46
3. Propionic	133	29	94	29	31	29	<b>7</b> 8	Xylene	46
							0.5	Ether	49
4. Butyric	182	29	97	29	52	29	24	Xylene	46
<ol><li>Isobutyric</li></ol>	300	29	182	29	64	29			
6. Valeric	200	29	140	29	49	29			
7. Isovaleric	225	29	138	29	80	29			
8. Hexanoic	94	29	96	29	30	29	160	Xylene	46
							0.1	Ether	49
<ol><li>Isohexanoic</li></ol>			68	29	50	29			
10. Crotonic	450	29	271	29	136	29	419	Xylene	46
<ol><li>Chloroacetic</li></ol>	132ª	43			96⁴	43	1.6	Nitrobenzene	43
	4.5	42	2.2	42					
12. Bromoacetic	0	29	0	29	53	46			
<ol><li>Iodoacetic</li></ol>	60	29	37	29	16	29			
<ol> <li>β-Chloropropic</li> </ol>	onic 100	29	55	29	35	29			
15. α-Bromopropio	onic 30	29	16	29	9.5	29			
<ol> <li>β-Bromopropio</li> </ol>	onic 65	29	61	29	25	29			
17. β-Iodopropioni	ic 133	29	95	29	64	29			
<ol> <li>α-Bromobutyri</li> </ol>	c 47	29	22	29	22	29			
19. Dichloroacetic	44	43					157	CCl <sub>4</sub>	43
							0	Ether	43
20. Trichloroacetic	0	43			0	43	0	Ether	46
							0	Nitrobenzene	43
21. Picric	. 0	36	0.6	33	0	47			
		42							
22. Benzoic	<b>7</b> 9	29	295	37	33	29	0	Ether	46
•			298	20	120	17	1440	Xylene	46
			108	36					
23. o-Toluic	21	29			1	29			
24. p-Toluic	291	29			3.3	29			
25. o-Methoxybenz	oic 3.9	29			0	29			
26. p-Methoxybenz	oic 82	29			0.3	29			
27. o-Chlorobenzoi		29			11	29	312	Xylene	46
28. m-Chlorobenzo		29			0	29		•	
29. p-Chlorobenzoi		29			0	29			
30. o-Nitrobenzoic	0	29			1	29			
31. m-Nitrobenzoio		29			61	29	133	Xylene	46
32. p-Nitrobenzoic	0	29			0	29		•	
33. o-Bromobenzoi	_				30	29			
34. m-Bromobenzo	*				0	29			
35. Salicylic	17	29			44	29	57	Xylene	46
36. Acetylsalicylic	143	29			75	29		<del>.</del>	
37. Methylanthrani					85	29			
38. Phenylacetic	145	29	151	29	56	29			
39. Anthranilic					770	29			

a Doubtful value.

cient or partition ratio) of dibutyl phosphate in hexane (when  $C_{\text{org}} = 0.05 \, M$ ) can be explained in terms of the conversion of the dimer to a polymer chain.

$$(RO)_{2}P \xrightarrow{O----H-O} P(OR)_{2} \Longrightarrow OR \xrightarrow{OR} OR \xrightarrow{OR----O-P-OH----->_{x}} OR \xrightarrow{OR} OR \xrightarrow{OR} OR$$

For solutes showing negligible ionization (the work with the phosphate esters was done in 0.1 M HNO<sub>3</sub>) in the aqueous phase, it is easy to test if a higher polymer is formed in the organic phase. It has been pointed out 35 that if a trimer is formed

(45) A. Bekturov, J. Gen. Chem., 9, 419 (1939).
(46) H. W. Smith, J. Phys. Chem., 25, 204, 605 (1921).
(47) W. Herz and M. Lewy, Z. Elektrochem., 46, 818 (1905).
(48) N. A. Kolossowsky and A. Bekturov, Bull. Soc. Chim. Fr., 2, 460 (1935).

(49) W. U. Behrens, Z. Anal. Chem., 69, 97 (1926).

(50) D. Dyrssen and L. D. Hay, Acta Chem. Scand., 14, 1091 (1960).

$$K_{\rm assoc} = C_{\rm tr}/(C_{\rm mon})^3 \tag{15}$$

where  $C_{\rm tr} = {\rm concentration}$  trimer in organic phase and  $C_{\rm mon} = {\rm concentration}$  monomer in organic phase. Hence

$$C_{\rm app} = C_{\rm mon} + 3C_{\rm tr} = C_{\rm mon} + 3K_{\rm assoc}C_{\rm mon}^3$$
 (16)

where  $C_{\rm app}=$  total concentration solute in organic phase (regardless of form), and  $C_{\rm w}=$  concentration in water phase (no polymerization). Assuming trimer cannot exist in the aqueous phase, the true partition coefficient for monomer is

$$P = C_{\text{mon}}/C_{\text{w}}$$

Therefore

$$C_{\text{app}} = PC_{\text{w}} + 3K_{\text{assoc}}(PC_{\text{w}})^3$$

$$P^* = P + 3K_{\text{assoc}}P^3C_{\text{w}}^2$$
(17)

A plot of the apparent partition coefficient,  $P^*$ , vs. the water concentration squared,  $C_{\rm w}^2$ , should give a straight line with the intercept yielding the value P and the slope yielding the value  $K_{\rm assoc}$ .

Many investigators have followed similar derivations, but some have not limited the applications to relatively un-ionized solutes. For example, Almquist<sup>51</sup> observed a straight line plot of  $C_o/C_w$  vs.  $C_w$  with picric acid in the chloroform—water system. Assuming the applicability of the general relationship

$$C_{\rm o}/C_{\rm w} = n(K_{\rm assoc}P^nC^{n-1}) + P \tag{18}$$

he calculated that the true partition coefficient was 0.46 and the association constant was 8.6. However, if we use the measured ionization constant for picric acid, we get constant values of P=15.8 and  $K_{\rm assoc}=0$ . As pointed out above, picric acid is apparently not associated in benzene, and we would expect it to be even less associated in chloroform. Furthermore, the value of 15 for P fits in much better when compared to the octanol—water system by means of the regression equation A in Table VIII.

Most investigators have assumed that the amount of dimerization of aliphatic acids in the aqueous phase is insignificant, an assumption which seems reasonable if only a head-tohead dimer is possible.

However, with higher homologs other possibilities exist. Micelle formation becomes quite significant even at low concentrations with long-chain fatty acids.<sup>52</sup> Even though one works at concentrations below the critical micelle concentration (cmc), the problem of association in the aqueous phase cannot be eliminated. Entwinement of the long alkyl chains occurs in very dilute solutions.<sup>53</sup> Careful examination of cryoscopic data, Raman spectra, and vapor pressure measurements<sup>16,54,55</sup> have been interpreted to yield aqueous phase dimerization constants for carboxylic acids which increase with chain length: formic, 0.04; acetic, 0.16; propionic, 0.23; butyric, 0.36. From a careful study of the distribution of acetic

acid in the benzene-water system, it was concluded <sup>16</sup> that the dimer association constant in water is only one-fifth this large (*i.e.*, 0.033). Nevertheless, the effect becomes quite large with dodecanoic acid, making the determination of a true monomer partition coefficient almost impossible. <sup>56</sup> Thus the present data have not completely eliminated the possibility of head-to-head dimerization of fatty acids in the aqueous phase, but the preponderance of new evidence <sup>18</sup> favors the "chain entwinement" viewpoint.

Distribution studies have also been made with other types of solutes which are known to form micelles at relatively low concentrations in water such as alkylpyridinium and pyridonium chlorides and *p-tert*-octylphenoxypolyoxyethanol surfactants. Over a range of solute concentrations *below cmc*, constant *P* values have been observed.<sup>57,58</sup>

#### C. THERMODYNAMICS OF PARTITIONING SYSTEMS

Solvent systems which are almost completely immiscible (e.g., alkanes-water) are fairly well behaved and lend themselves to more rigorous thermodynamic treatment of partitioning data than solvent systems which are partially soluble in each other.  $^{17,59,50}$  The following development can be applied more strictly to the former systems, but the departures from ideality exhibited by the more polar solvent systems are not so great as to render this approach valueless. They will be discussed later. It should be noted here that the thermodynamic partition coefficient is a ratio of mole fractions ( $P' = X_o/X_w$ ), and it should not be confused with the more common expression of P which is a dimensionless ratio of concentrations.

Cratin<sup>51</sup> has presented a lucid discussion of some of the aspects of the thermodynamics of the partitioning process. The following discussion is drawn from his analysis which relies heavily on extrathermodynamic assumptions.

For each of the "i" components comprising an ideal solution, the following equation is assumed to hold

$$\mu_{\mathbf{i}}(T,P,X) = \mu_{\mathbf{i}}^{\theta}(T,P) + RT \ln X_{\mathbf{i}}$$
 (19)

where  $\mu_i^{\theta}$  is the chemical potential of pure "i" in the solution under specified conditions, and  $X_i$  is its mole fraction.  $\mu_i^{\theta}$  is not the actual chemical potential of pure "i" but the value it would have if the solution remained ideal up to  $X_i = 1$ . It can be shown<sup>61</sup> that, for dilute solutions, the chemical potential based on mole fractions is larger than that based on molar concentrations by a factor of  $RT \ln \overline{V_s}^{\circ}$ , where  $V_s^{\circ}$  is the molar volume of solvent and therefore

$$\mu_{i}(T,P,X) = \mu_{i}^{\theta}(T,P) + RT \ln \overline{V}_{s}^{\circ} + RT \ln C_{i}$$
 (20)

An interesting approach to the study of the intermolecular forces involved in partitioning is to assume that the free energy of transfer of a molecule can be factored into the contributions of its various parts; that is, P is an additive-constitutive property of a molecule (see section V). Cratin<sup>61</sup> considered the thermodynamic implications of this concept. Assuming that the total transfer free energy of a molecule  $(\mu_t)$  is made up of a

<sup>(51)</sup> H. Almquist, J. Phys. Chem., 37, 991 (1933).

<sup>(52)</sup> J. L. Kavanau, "Structure and Function in Biological Membranes," Vol. I, Holden-Day, San Francisco, Calif., 1965, p 11.

<sup>(53)</sup> P. Mukerjee, K. J. Mysels, and C. I. Dulin, J. Phys. Chem., 62, 1390 (1958).

<sup>(54)</sup> A. Katchalsky, H. Eisenberg, and S. Lifson, J. Amer. Chem. Soc., 73, 5889 (1951).

<sup>(55)</sup> D. Cartwright and C. Monk, J. Chem. Soc., 2500 (1955).

<sup>(56)</sup> C. Church and C. Hansch, unpublished results.

<sup>(57)</sup> E. Crook, D. Fordyce, and G. Trebbi, J. Colloid Sci., 20, 191

<sup>(58)</sup> H. L. Greenwald, E. K. Kice, M. Kenly, and J. Kelly, Anal. Chem., 33, 465 (1961).

<sup>(59)</sup> R. Aveyard and R. Mitchell, Trans. Faraday Soc., 65, 2645 (1969).

<sup>(60)</sup> R. Aveyard and R. Mitchell, *ibid.*, 66, 37 (1970).(61) P. D. Cratin, *Ind. Eng. Chem.*, 60, 14 (1968).

lipophilic component ( $\mu_L$ ) and n hydrophilic groups ( $\mu_H$ ), we may write

$$\mu_t(w) = \mu_L(w) + n\mu_H(w)$$

$$\mu_t(0) = \mu_L(0) + n\mu_H(0)$$

Assuming ideal behavior

$$\mu_t(\mathbf{w}) = \mu_L^{\theta}(\mathbf{w}) + n\mu_H^{\theta}(\mathbf{w}) + RT \ln X(\mathbf{w})$$

$$\mu_t(o) = \mu_L^{\theta}(o) + n\mu_H^{\theta}(o) + RT \ln X(o)$$

Converting from mole fractions to concentration terms, the above equations become

$$\mu_{t}(w) = \mu_{L}^{\theta}(w) + n\mu_{H}^{\theta}(w) + RT \ln \mathcal{V}^{\circ}(w) + RT \ln C(w)$$

$$\mu_t(o) = \mu_L^{\theta}(o) + n\mu_H^{\theta}(o) + RT \ln \vec{V}^{\circ}(o) + RT \ln C(o)$$

At equilibrium  $\mu_t(w) = \mu_t(o)$ ; hence equating equations, collecting terms, and replacing C(o)/C(w) by P, we obtain

$$[\mu_L^{\theta}(\mathbf{w}) - \mu_L^{\theta}(\mathbf{o})] + RT \ln \left[ \nabla^{\circ}(\mathbf{w}) / \nabla^{\circ}(\mathbf{o}) \right] +$$

$$n[\mu_{\rm H}^{\theta}(w) - \mu_{\rm H}^{\theta}(o)] = +RT \ln P$$
 (21)

Setting  $\Delta \mu^{\theta} = \mu^{\theta}(\mathbf{w}) - \mu^{\theta}(\mathbf{o})$ , eq 21 takes the form

$$\log P = \frac{n\Delta\mu_{\rm H}^{\theta}}{2.3RT} + \frac{\Delta\mu_{\rm L}^{\theta}}{2.3RT} + \log \left[ \vec{V}^{\circ}(w) / \vec{V}^{\circ}(o) \right]$$
 (22)

If eq 22 holds, a plot of  $\log P$  vs. n will be linear with a slope equal to  $\Delta \mu_{\rm H}^{\theta}/2.3RT$  and an intercept of  $\Delta \mu_{\rm L}^{\theta}/2.3RT + \log [\bar{V}^{\circ}({\rm w})/\bar{V}^{\circ}({\rm o})]$ . Cratin illustrated the validity of eq 22 by plotting the data of Crook, Fordyce, and Trebbi<sup>§7</sup> for tert-octyl-phenoxyethoxyethanols of the type

partitioned between isooctane and water. Compounds with n varying from 1 to 10 were studied. A good linear relation was obtained from n=3 to n=10. A slight departure from linearity for n=1 and 2 was found. The linear relationship between n and P is given as  $^{58}$ 

$$\log P = -0.442n + 3.836 \tag{23}$$

From eq 23 the standard free energy change (25°) for the transfer of a mole of  $-CH_2CH_2O$ - from isooctane to water is -0.602 kcal and the free energy change (0  $\rightarrow$  w) for the *p-tert*-octylphenoxyethoxy group is +6.52 kcal/mol. Of course since the partitioning data on the phenoxyethoxyethanols were obtained at a single constant temperature, this is not a very rigorous test of eq 22 since under this condition,  $\mathcal{V}^{\circ}(0)/\mathcal{V}^{\circ}(w)$  will also be constant. Nevertheless, eq 22 does define the necessary conditions for additivity of  $\log P$  values. The standard free energy of transfer of solute in the partitioning process is given by

$$\Delta G_{tr}^{\theta} = \Delta \vec{\mu}^{\theta} = RT \ln P' \tag{24}$$

With the usual assumption that the standard molar enthalpy change is not temperature dependent in the range studied, <sup>61</sup> it is true that

$$\frac{\partial \ln P'}{T} = \frac{\Delta \bar{H}^{\theta}}{RT^2} \tag{25}$$

where  $\Delta \vec{H}^{\theta}$  is equivalent to the standard enthalpy of transfer between the two solvents. It is thus possible to calculate this

enthalpy of transfer by measuring P' over a range of temperatures. In practice this is rather imprecise because of two implied assumptions: first, that the levels of each solvent dissolved in the other remain constant over the temperature range; second, if P is measured in terms of concentrations, that the ratio of solvent molar volumes remains constant also. For this reason the preferred method of obtaining the enthalpy of transfer is by measuring the heats of solution in two separate solvents, whence

$$\Delta \bar{\mu}^{\circ} = \Delta \bar{H}_{tr}^{\circ} = \Delta H^{\circ}(w) - \Delta H^{\circ}(o) \tag{26}$$

The entropy of transfer can, of course, be calculated from

$$\Delta G_{\rm tr}{}^{\circ} = \Delta H_{\rm tr}{}^{\circ} - T \Delta S_{\rm tr}{}^{\circ} \tag{27}$$

Aveyard and Mitchell<sup>59,40</sup> have performed these calculations for aliphatic acids and alcohols partitioned between alkanes and water. They find much greater enthalpies for the alcohols which they ascribe to the "dehydration" of the OH function during transfer. Although the acids are also "dehydrated," they are thought to recover much of this energy in the hydrogen bonding of dimerization. The corresponding  $\Delta S$  values for the acids are much smaller than for the alcohols, and thus the net free energy changes are not greatly different.

The changes in miscibility of more polar solvent systems as a function of solute concentration have been studied in only a few systems.  $^{62-64}$  However, experience has shown that the partition coefficient at low solute concentrations is usually not highly dependent on this effect. Even with solvent pairs as miscible as isobutyl alcohol-water, the effect is small with solutes at 0.01 M or less, and solvent pairs less miscible than chloroform-water will easily tolerate 0.1 M solute without appreciable miscibility changes.

Equation 25 shows how one would expect the partition coefficient to vary with temperature. However, it is not very enlightening from a practical point of view, for the necessary heats of solution are rarely available and, furthermore, there is the added unknown of the dependence of solvent molar volume on temperature. The effect of temperature on P is not great if the solvents are not very miscible with each other. A summary in Table III of results of varying degrees of accuracy for a variety of solutes in different solvent systems indicates the effect is usually of the order of 0.01 log unit/deg and may be either positive or negative. Insufficient data are present to attempt any useful generalizations.

# D. ENERGY REQUIREMENTS FOR PHASE TRANSFER

The relative roles of the various binding forces which determine the way a solute distributes itself between two phases

<sup>(62)</sup> G. Forbes and A. Coolidge, J. Amer. Chem. Soc., 41, 150 (1919).

<sup>(63)</sup> P. Grieger and C. Kraus, ibid., 71, 1455 (1949).

<sup>(64)</sup> E. Klobbie, Z. Phys. Chem., 24, 615 (1897).

<sup>(65)</sup> D. Soderberg and C. Hansch, unpublished analysis.(66) A. Hantzsch and F. Sebalt, Z. Phys. Chem., 30, 258 (1899).

<sup>(66)</sup> A. Hantzsch and F. Sebalt, Z. Phys. Chem., 30, 238 (1899). (67) R. L. M. Synge, Biochem. J., 33, 1913 (1939).

<sup>(68)</sup> T. S. Moore and T. F. Winmill, J. Chem. Soc., 101, 1635 (1912).

<sup>(69)</sup> E. M. Renkin, Amer. J. Physiol., 168, 538 (1952).

<sup>(70)</sup> H. Meyer, Arch. Exp. Pathol. Pharmakol., 46, 338 (1901).

<sup>(71)</sup> J. Mindowicz and I. Uruska, Chem. Abstr., 60, 4854 (1964).

<sup>(72)</sup> R. C. Farmer and F. J. Warth, J. Chem. Soc., 85, 1713 (1904).

<sup>(73)</sup> T. Kato, Tokal Denkyoku Giho, 23, 1 (1963); Chem. Abstr., 60, 8701 (1964).

<sup>(74)</sup> J. Mindowicz and S. Biallozor, ibid., 60, 3543 (1964).

Table III			
Temperature Effect	on	Log	P

Solvent-water	Solutea	Temp, °C	△ log P/deg	Ref
Octanol	Hexanoic acid	4-22	$1.7 \times 10^{-3}$	56
	Octanoic acid	422	0.0	56
	n-Butylpyridinium bromide	4-22	$-1.0 \times 10^{-2}$	65
	n-Tetradecylpyridinium bromide	4-22	$-1.0 \times 10^{-2}$	65
Ethyl ether	Acetic acid	0-25	$-1.2 \times 10^{-3}$	66
	Succinic acid	15-25	$-0.9 \times 10^{-2}$	62
Chloroform	Acetyl-d-leucine	4-27	$-0.9 \times 10^{-2}$	67
	Acetyl-d-leucine	24-37	$-1.3 \times 10^{-2}$	67
	Methylamine	18-32	$1.0 \times 10^{-2}$	68
	Ammonia	18-32	$0.8 \times 10^{-2}$	68
Oil				
Olive	Antipyrine	7-36.5	$1.2 \times 10^{-2}$	69
Cod-liver	Antipyrine	7-36.5	$1.5 \times 10^{-2}$	69
Cottonseed	Ethanol	3-30	$1.1 \times 10^{-2}$	70
Benzene	o-Phenylenediamine	20-70	$3.4 \times 10^{-3}$	71
	p-Phenylenediamine	20-70	$4.4 \times 10^{-3}$	71
	p-Nitrosomethylaniline	6-25	$2.1 \times 10^{-3}$	72
	Acetic acid	6-18.5	$3.0 \times 10^{-3}$	66
Xylene	2-Methyl-5-ethylpyridine	10-30	$4.5 \times 10^{-3}$	73
	2-Methyl-5-ethylpyridine	30-50	$7.0 \times 10^{-3}$	73
Toluene	2-Methyl-5-ethylpyridine	10-30	$7.5 \times 10^{-3}$	73
	2-Methyl-5-ethylpyridine	30-50	$-4.0 \times 10^{-3}$	73
	Ethylamine	18-32	$1.7 \times 10^{-2}$	68
	Diethylamine	18-32	$1.9 \times 10^{-2}$	68
	Triethylamine	18-32	$1.9 \times 10^{-2}$	68
1-Hexanol	Malonic acid	20-60	$-1.2 \times 10^{-3}$	74
	Succinic acid	20-60	$-0.5 \times 10^{-3}$	74
Heptane	p-Chloroaniline	15-35	$5.5 \times 10^{-3}$	75
Isooctane	p-tert-Octylphenoxynonaethoxy-			
	ethanol (OPE-9)	25-60	$2.8 \times 10^{-2}$	58
	·	Avera	$ge = 9.0 \times 10^{-3}$	

<sup>&</sup>lt;sup>a</sup> No correction made for  $\Delta p K_a/dT$  for any of the acids.

has been examined by a number of authors.76 Kauzmann77 has given a particularly clear summary of this thinking, especially from the point of view of the interaction of small molecules with proteins, and the following discussion relies heavily on his summary.

The study of the hydrocarbons in water shows that although the  $\Delta H$  of solution is negative (indicating a favorable enthalpy change by the evolution of heat), such compounds are notoriously insoluble in water. This reluctance to mix with water is a result of a large  $\Delta S$  for the process. It is this large energy of reordering the hydrocarbon solute and the water solvent molecules which keeps them in separate phases when placed together. The same phenomenon regulates the distribution of apolar solute molecules in an apolar solvent-water system. Table IV77 illustrates this point.

A variety of work, less well defined than that of Table IV, supports the conclusion that the entropic component of  $\Delta G$  plays a large role in the position of equilibrium (partition coefficient) taken by nonpolar compounds in nonpolar water-solvent systems. Kauzmann has put forward the following facts.

1. Mixtures of lower aliphatic alcohols with water show positive deviations from Raoult's law, indicating an increase

Table IV Thermodynamic Changes in Hydrocarbon Transfer

	T	$\Delta S_{\mathbf{u}^a}$	$\Delta H$	$\Delta G_{\mathrm{u}}^{a}$	
CH <sub>4</sub> in benzene → CH <sub>4</sub> in H <sub>2</sub> O	298	-18	-2800	+2600	
CH <sub>4</sub> in ether → CH <sub>4</sub> in H <sub>2</sub> O	298	-19	-2400	+3300	
CH <sub>4</sub> in CCl <sub>4</sub> → CH <sub>4</sub> in H <sub>2</sub> O	298	-18	-2500	+2900	
Liquid propane → C <sub>3</sub> H <sub>8</sub> in H <sub>2</sub> O	298	-23	1800	+5050	
Liquid butane → C <sub>4</sub> H <sub>10</sub> in H <sub>2</sub> O	298	-23	-1000	+5850	
Liquid benzene → C <sub>6</sub> H <sub>6</sub> in H <sub>2</sub> O	291	-14	0	+4070	
Liquid toluene → C7H8 in H2O	291	-16	0	+4650	
Liquid ethybenzene → C <sub>8</sub> H <sub>10</sub> in	291	-19	0	+5500	
H <sub>2</sub> O			•		

 $<sup>^{</sup>a}$   $S_{u}$  and  $G_{u}$  refer to the unitary entropy and free energy in cal/mol.

in unitary free energy ( $\Delta G_{\mu} > 0$ ) for the transfer of alcohol from alcohol to water phase, this despite the fact that heat is evolved ( $\Delta H < 0$ ) on the addition of these alcohols to water. Therefore  $\Delta S_u = (\Delta H_u - \Delta G_u)/T < 0$  when an alcohol molecule is transferred to water.

2. The solubilities of many liquid aliphatic compounds (e.g., 3-pentanone, butanol, ethyl acetate, ethyl bromide) in water decrease with increase in temperature. Hence  $\Delta H$  for the transfer process must, according to the principle of Le Chatelier, be <0. The fact that some of these substances are extremely soluble in water means that  $\Delta G_{\rm u} > 0$ . Therefore,  $\Delta S_u$  for the mixing must be negative. Similar to this is the

<sup>(75)</sup> A. Aboul-Seoud and A. El-Hady, Rec. Trav. Chim. Pays-Bas, 81, 958 (1962).

<sup>(76)</sup> H. Frank and M. Evans, J. Chem. Phys., 13, 507 (1945).

<sup>(77)</sup> W. Kauzmann, Advan. Protein Chem., 14, 37 (1959).

fact that on heating aqueous solutions of such compounds as nicotine, *sec*-butyl alcohol, etc., separation into two phases results at temperatures not far above room temperature.

3. The formation of micelles from detergent molecules in water is accompanied by very small heat changes; that is to say, the dissociation of micelles into individual molecules does not depend on a large positive value of  $\Delta H$ . Hence it is assumed that this association-dissociation reaction is controlled largely by a large negative  $\Delta S$ .

The origin of the large negative unitary entropy change and the small negative enthalpy change involved in partitioning between aqueous and nonaqueous phases was first clearly appreciated by Frank and Evans. They reached the conclusion that when organic compounds are placed in water, the water molecules arrange themselves around the apolar parts in what was termed "iceberg" structures. The word "iceberg" was, perhaps, not too well chosen for it was not meant to imply that the structure was as rigid or as extensive as in pure ice, and it differed further in being denser rather than lighter than water. This is apparent from the data in Table V.77

Table V
Volume Changes in Transfering Hydrocarbons from Nonpolar Solvents to Water

	$\Delta V$ , $ml/mol$
CH₄ in hexane → CH₄ in H₂O	-22.7
$C_2H_6$ in hexane $\rightarrow C_2H_6$ in $H_2O$	-18.1
Liquid propane → C <sub>3</sub> H <sub>8</sub> in H <sub>2</sub> O	-21.0
Liquid benzene → C <sub>6</sub> H <sub>6</sub> in H <sub>2</sub> O	-6.2

These structures were later referred to as "flickering clusters" to indicate their lack of stability. Since the entropy lost in freezing a mole of water is 5.3 cal/deg and the unitary entropy loss per mole of hydrocarbon entering the aqueous phase is only 20 cal/deg (see Table IV), either only four or five molecules are associated with each hydrocarbon unit or the structure is less firm than in pure ice.

The Frank-Evans point of view is that the stripping of the form-fitting sweater  $^{78}$  of water molecules from the apolar part of the solute results in a large entropy change in the randomization of the water molecules. An alternative point of view is that of Aranow and Witten.  $^{79}$  They reason that in the aqueous phase the apolar chain of a solute molecule is rigidly held in a favored rotational configuration by the structured layer of water molecules surrounding it. In the organic solvent its rotational oscillations are relatively unrestricted. They write the canonical single particle partition function, Z, for a molecule having n carbon-to-carbon bonds in the apolar environment as

$$Zn = \psi \left( \sum_{i} e^{-\epsilon_{i}/kT} \right)^{n}$$
 (28)

Because of the threefold increase in the number of energy levels, the corresponding partition function in the water phase is

$$Zn = \psi \left( \sum_{i} 3e^{-\langle \epsilon_{i} \rangle / kT} \right)^{n}$$
 (29)

The partition coefficient per  $-CH_2$ - in an alkyl chain can then be defined as

$$P = \frac{\psi_{\alpha} \left( \sum_{j} 3e^{-\langle \epsilon_{j} \rangle / kT} \right)^{n}}{\left( \sum_{i} e^{-\epsilon_{i} / kT} \right)^{n}}$$
(30)

where  $\alpha$  and  $\beta$  refer to the organic and aqueous phases, respectively. This is assuming that the motions of internal rotation are separable from all other motions and that the internal rotation contribution has been assumed representable as the product of n equivalent factors. At room temperature, if kT is much smaller than the spacing between  $\langle \epsilon_0 \rangle$  and  $\langle \epsilon_1 \rangle$  or between  $\epsilon_0$  and  $\epsilon_1$ , then  $P \cong (\psi_\alpha/\psi_\beta)3n(e^{-\langle \epsilon_0 \rangle - \epsilon_0/kT})^n$ . If  $\psi_\alpha/\psi_\beta$  varies little with n and  $\langle \epsilon_0 \rangle \sim \epsilon_0$ 

$$P_n/P_{n-1} \cong 3$$
 or  $\log P_{(CH_2)} \cong 0.5$ 

Aranow and Witten present partition data to show that the difference in P values between adjacent members in a homologous set of fatty acids is about 3. This factor has also been observed by others<sup>4,9,80</sup> for a variety of homologous series.

A  $-CF_2$ - group would be expected to affect its environment a great deal more than a  $-CH_2$ - unit would, 79 but it still has a very similar geometry. Therefore, it was predicted that the P values of a hydrocarbon chain should differ from a fluorocarbon chain if the flickering cluster theory holds, but should be nearly the same if Aranow and Witten's theory holds. The following set (Table VI) of partition coefficients

 $\begin{tabular}{ll} Table \ VI \\ \end{tabular}$  Octanol-Water Partition Coefficients of Fluoro Compounds  $^a$ 

	Log P	$rac{\Delta\ log}{P/CF_2}$
1. CF <sub>8</sub> CH <sub>2</sub> OH	$0.41 \pm 0.03$	0.82
2. CF <sub>3</sub> CF <sub>2</sub> CH <sub>2</sub> OH	$1.23 \pm 0.06$	0.52
<ol> <li>CF<sub>3</sub>CF<sub>2</sub>CF<sub>2</sub>CH<sub>2</sub>OH</li> </ol>	$1.81 \pm 0.06$	0.56
<ol> <li>CF₃COOC₂H₅</li> </ol>	$1.18 \pm 0.04$	0.94
<ol> <li>CF<sub>3</sub>CF<sub>2</sub>COOC<sub>2</sub>H<sub>5</sub></li> </ol>	$2.12 \pm 0.04$	0.94

 $<sup>^</sup>a$  Log P values are the result of four separate determinations made at room temperature using vapor-phase chromatography for analysis. Unpublished data: C. Church, F. Helmer, and C. Hansch.

throws some light on the problem.

In comparing compounds 1 and 2, for example, one must keep in mind the fact that the electron-withdrawing groups, when placed near elements containing lone pair electrons, usually raise the partition coefficient by an increment greater than simple additivity. <sup>10</sup> However,  $\sigma_1$  for CF<sub>3</sub> is 0.41 and  $\sigma_1$  for C<sub>2</sub>F<sub>5</sub> is 0.41<sup>81</sup> so that this effect is ruled out. Two of the three values are considerably higher than the value of 0.5/CF<sub>2</sub> predicted by the Aranow-Witten hypothesis, and therefore the partitioning data favor the Frank-Evans hypothesis.

Hydrogen bonding is the next factor to consider in studying the energy requirements for phase transfer. This factor is of paramount importance in determining the character of both the solute and the organic solvent phase. Compounds such as

<sup>(78)</sup> E. Grunwald, R. L. Lipnick, and E. K. Ralph, J. Amer. Chem. Soc., 91, 4333 (1969).

<sup>(79)</sup> R. H. Aranow and L. Witten, J. Phys. Chem., 64, 1643 (1960).

<sup>(80)</sup> C. Hansch and S. M. Anderson, J. Org. Chem., 32, 2583 (1967).

<sup>(81)</sup> W. A. Sheppard, J. Amer. Chem. Soc., 87, 2410 (1965).

alcohols, esters, and ketones have quite different properties than hydrocarbons. Moreover, as solvents, it is not simply the hydrogen bonding character of the pure compound which must be considered. One must keep in mind that rather large amounts of water (especially when figured in molar terms) are present in these oxygen-containing solvents when saturated during the partititoning process (see Table VIII). For example, octanol dissolves in water only to the extent of 0.0045 M. However, the molar concentration of water in octanol is 2.30. The transfer of an alcohol or acid from the water phase to a hydrocarbon phase may involve complete "dehydration" of the polar OH or COOH function, It seems highly unlikely that such complete "dehydration" would occur in, say, butanol which is 9 M with respect to water content at saturation. Even in octanol, which is 2.3 M with respect to water at saturation, it is likely that most highly polar functions would be more or less solvated by water and/ or the hydroxyl function of the alcohol.

Certain solvents such as alcohols and amines can act as both donors and acceptors in hydrogen bonding. This increases their versatility as solvents. For this reason Meyer and Hemmi<sup>82</sup> suggested using oleyl alcohol-water partition coefficients as a reference system for evaluating partitioning of drugs in biological systems. Earlier workers had used esters (olive oil, cotton seed oil, etc.) to represent lipophilic biophases. Since many NH and OH groups are present in enzymes and membranes, it is not surprising that alcoholwater systems give better correlations and thus have become more widely used as extrathermodynamic reference systems.

Other intermolecular forces which must be considered in the partitioning process are dispersion forces arising out of electron correlation. It seems that these would play a minor role in setting equilibrium positions of solutes. Dispersion forces involved in complex formation in solution will largely cancel out since, when a solute molecule leaves one phase and enters a new phase, it exchanges one set of London interactions for another.83

The energy required to transfer from the aqueous phase to the organic phase any solute which contains two or more formal charges is obviously going to depend heavily on the dielectric constant of the particular organic phase in question. Most of the water-immiscible organic solvents have dielectric constants much lower than that of water, and thus charged solutes must contain rather large hydrocarbon residues to have positive log P values. This combination makes them very surface active and usually results in difficulties of measurement.

Amphoteric molecules such as amino acids, tetracycline, or the sulfa drugs are most lipophilic when they contain an equal number of positive and negative charges. Typical dependence of log P upon pH is shown in Figure 1.

For bases which can accept one or more hydrogen ions,  $A^{n+}$ , the partition coefficient,  $P_{A^{n+}}$ , is related to the partition coefficient of an associated strong acid,  $P_{\rm H}$ <sup>+</sup>, by the expression

$$P_{\rm A}^{n+} = k[P_{\rm H} +]^n \tag{31}$$

This relationship for the 2-butanol-water system has been verified<sup>84</sup> by measuring  $P_A^{n+}$  of ammonia, alanine, L-

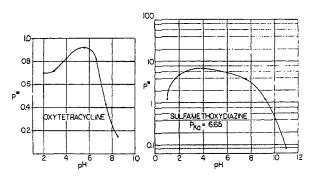


Figure 1. Variation of apparent partition coefficient with pH: (left) J. Colaizzi and P. Klink, J. Pharm. Sci., 58, 1184 (1969); (right) W. Scholtan, Arzneim.-Forsch., 18, 505 (1968).

arginine, and L-histidyl-L-histidine, as well as  $P_{H+}$  of the strong acids HOEtSO3H, CH3SO3H, HCl, HBr, HNO3, and HClO<sub>4</sub>. A log-log plot of the P values gave a series of straight lines with a slope of 1 for ammonia and alanine, 2 for Larginine, and 3 for L-histidyl-L-histidine.

Solutes which are ionized and completely dissociated in the aqueous phase present additional complications to the treatment of partitioning as strictly an equilbrium process, such as given in section II. The identity of the solute species in both phases is rarely assured. If electrical conductivity resulted solely from the current-carrying capability of single ions, then salts in organic solvents with relatively high dielectric constants (e.g., nitrobenzene, 36.1; or nitromethane, 39.4) could be considered to be over 90% dissociated into single ions at 10-3 M.85,86 But as the dielectric constant decreases, the mutual energy of configurations where there are three ions in contact (A-C+A-) becomes comparable to kT.87 At this point they are thermally stable and capable of carrying current, and therefore conductance is not proof per se of complete dissociation.

Even relatively hydrophilic ion pairs can be accommodated in a lipophilic solvent such as cyclohexane if this solvent contains a small amount of a dipolar solvating agent. In the instance where the cation is the large lipophilic member of the pair, the most effective solvating agents appear to be those with acidic protons, e.g., chloroform, alcohols, and phenols.88 In the reverse situation where the small cationic charge is unshielded, solvating species with nucleophilic sites (e.g., ethers, ketones, amides, and phosphate esters) are most effective.

In considering the partitioning of carboxylic acids and amines, it is convenient to work with the  $\Delta \log P$  resulting from the addition or removal of a proton to create an ion. (This is analogous to the definition of  $\pi$  values taken up on p 542.) By this convention,  $\Delta \log P = (\log P_{ion}) - (\log P_{ion})$  $P_{\text{neutral}}$ ) and will always have a negative sign for the more polar ion is obviously more hydrophilic.

For aliphatic acids,  $\Delta \log P$  is about -4.06; for salicylic, it is -3.09; for p-phenylbenzoic, it is -4.04. For a simple aliphatic amine (dodecyl), the  $\Delta \log P$  of protonation is -3.28.

<sup>(82)</sup> K. H. Meyer and H. Hemmi, Biochem. Z., 277, 39 (1935). (83) R. S. Mulliken and W. B. Person, J. Amer. Chem. Soc., 91, 3409 (1969).

<sup>(84)</sup> F. Carpenter, W. McGregor, and J. Close, ibid., 81, 849 (1959).

<sup>(85)</sup> H. Falkenhagen, "Electrolyte," S. Herzel, Leipzig, 1932.

<sup>(86)</sup> J. C. Philip and H. B. Oakley, J. Chem. Soc., 125, 1189 (1924).

<sup>(87)</sup> R. Fuoss and F. Accascina, "Electrolytic Conductance," Interscience, New York, N. Y., 1959, p 222.

<sup>(88)</sup> T. Higuchi, A. Michaelis, T. Tan, and A. Hurwitz, Anal. Chem., 39, 974 (1967).

For amines containing an aromatic ring, the  $\Delta$  log  $P_{R^+}$  values tend to vary (see Table XVII):

phenothiazines = 
$$-3.65$$
  
 $C_6H_6(CH_2)_8NH_2 = -2.92$   
procaine =  $-4.14$ 

Protonating an aromatic nitrogen appears intermediate; e.g., for acridine,  $\Delta \log P_{\rm H^+} = -3.90$ . Very little difference in the octanol-water  $\log P$  was observed for the amine salts whether the anion was chloride, bromide, or iodide.

It should be noted that if one wishes to measure the log  $P_{\text{octanol}}$  of a dissociable organic ion, he must buffer the system more than 4 pH units away from the p $K_a$  in most cases. The actual ratio of ionic to neutral form in the organic phase can be determined from the following expressions:

$$\log \frac{[A^-]}{[HA]}(\text{org}) = (\log P_{\text{ion}} - \log P_{\text{neutral}}) - (pK_a - pH)$$

$$\log \frac{[BH^+]}{[B]}(\text{org}) = (\log P_{\text{ion}} - \log P_{\text{neutral}}) - (pH - pK_a)$$

For example, in partitioning an aliphatic carboxylic acid with a p $K_n$  of 4.5 and the aqueous phase buffered at pH 8.5, only  $^{1}/_{10,000}$ th of the acid will be in the neutral form in the aqueous phase, and yet almost one-half of that present in the octanol phase will be the un-ionized species.

Since the difference in  $\log P$  between the ionic and neutral forms of solutes partitioned in other solvent systems is likely to be greater than that noted for octanol-water, it is even more difficult to directly measure the P values for ions in these systems. For instance, in partitioning codeine between CHCl<sub>3</sub> and an aqueous phase 0.1 and 1.0 N in HCl, the assumption was made that in neither case was the measured value distorted by any free amine in the organic phase. <sup>89</sup> However, values from Table XVII indicate that the  $\log P_{\text{CHCl}_3}$  of the free amine would be about 5.0 units higher than the hydrochloride, and therefore a pK<sub>4</sub> - pH difference of 5 units (pK<sub>8</sub> = 6.04; pH = 1) is not sufficient to assure that only ion pairs are being partitioned.

It is somewhat unexpected to find the  $\log P$  for the  $>N^+$ -CH<sub>3</sub> group lower than that of the  $>N^+$ -H group. In this case, the nature of the anion appears to make a small but real difference in the  $\log P_{\text{octanol}}$  value. (For N-hexadecylpyridinium,  $\Delta \log P_{\text{Br-Cl}} = 0.12$ .) The following  $\Delta \log P_{\text{octanol}}$  values were observed for adding both a methyl group and a positive charge to an amine:

	\(\Delta\line\line\line\line\line\line\line\line	Anion
Chlorpromazine	-5.35	Cl-
Pyridine	-5.00	${ m Br}^-$
$C_6H_5(CH_2)_3N(CH_8)_2$	-4.75	I-

The partition coefficient of ions between a nonpolar solvent and water plays an essential role in the application of these solvents as liquid ion-exchange membranes for ion-selective electrodes. So A lipophilic anion, such as oleate, dissolved in the solvent nitrobenzene can serve as the "site" species; see Figure 2. In theory, the selectivity among various cations is completely independent of the chemical properties of the "site" species and depends solely on the difference in parti-

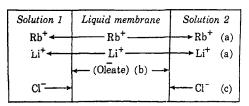


Figure 2. Ion-selective electrode (oleate in nitrobenzene): (a) Counterions which differ in log P; (b) the site ion (for an anion-selective electrode, dodecyl amine might be chosen); (c) co-ion.

tion coefficient of the ions in that solvent.  $^{90}$  For instance, the partition coefficient of monovalent cations between any alcohol and water are not greatly different,  $^{91}$  and therefore these solvents are not useful in liquid membrane electrodes. The partition coefficients in nitrobenzene, however, are markedly different,  $^{92}$  and this solvent has been employed in a useful electrode to measure [Li+] in the presence of [Rb+]. $^{90}$  The partition coefficients for the iodides fall in the following order: Li+ < Na+ < K+ < Rb+ < Et<sub>4</sub>N+ < Bu<sub>4</sub>N+, which is the order also found for the solvent system diisopropyl ketone-water. $^{93}$ 

Using dodecylamine as a site species, the order of anion sensitivity in a nitrobenzene membrane sytem is  $I^- > Br^- > Cl^- > F^{-,90}$  This is the same order as the partition coefficients of the anions measured in that solvent.<sup>92</sup>

For ideal behavior in a liquid membrane electrode, the site ion should be almost completely "trapped" within the organic phase, resulting in almost negligible exchange of co-ion; see Figure 2. Ideal behavior is also dependent upon complete dissociation of the site ions in the organic phase, and the concentration of site ions at which departure from ideality is noted may be a useful measure of the onset of association into ion pairs. Ion selectivity depends only slightly upon ion mobility and rates of diffusion across phase boundaries.<sup>94</sup>

Like nitrobenzene-water, the chloroform-water system gives a wide range of P values for the counterions associated with any large organic ion.  $^{95-97}$  This again raises the question of which system should one choose for a hydrophobic parameter to be used in correlating biological activity. Perhaps if one is investigating electrical potentials in isolated nerve tissue, for example, an ion-selective system might give values which rationalize more of the data. Yet it is widely accepted that with most drugs the biological response in the intact animal is only slightly dependent upon the nature of the counterion (as long as initial solubility is achieved), and thus a model system which is not ion selective should be preferred.

The distinction between ion-selective partitioning systems and the nonselective systems may be simply that the former have aprotic organic phases. In an extensive study of ion solvation in protic vs. aprotic solvents, it has been shown<sup>99</sup>

<sup>(89)</sup> G. Schill, R. Modin, and B. A. Persson, Acta Pharm. Suecica, 2, 119 (1965).

<sup>(90)</sup> G. Eisenman in "Ion Selective Electrodes," No. 314, R. Durst, Ed., National Bureau of Standards, Washington, D. C., 1969, pp 4-8.

<sup>(91)</sup> H. Ting, G. Bertrand, and D. Sears, Biophys. J., 6, 813 (1966).

<sup>(92)</sup> J. T. Davies, J. Phys. Chem., 54, 185 (1950).

<sup>(93)</sup> F. Karpfen and J. Randles, Trans. Faraday Soc., 49, 823 (1953).
(94) H. L. Rosano, P. Duby, and J. H. Schulman, J. Phys. Chem., 65, 1704 (1961).

<sup>(95)</sup> R. Bock and G. Beilstein, Z. Anal. Chem., 192, 44 (1963).

<sup>(96)</sup> R. Bock and C. Hummel, ibid., 198, 176 (1963).

<sup>(97)</sup> R. Bock and J. Jainz, ibid., 198, 315 (1963).

<sup>(98)</sup> A. Albert, "Selective Toxicity," 2nd ed, Wiley, New York, N. Y., 1960, p 116.

<sup>(99)</sup> A. J. Parker, Quart. Rev. Chem. Soc., 163 (1962).

that anion solvation by protic solvents decrease strongly in the order  $F^- > Cl^- > Br^- > I^- >$  picrate<sup>-</sup>, while in aprotic solvents the order is reversed. Even though for this study methanol was used as the standard protic solvent (rather than water) and a ratio of solubilities rather than a partition coefficient measured solvent affinity, these data are quite relevant to this review. They predict the large range and correct order of P values for the above anions in the nitrobenzenewater system and predict a very small range in any alcoholwater system (nonprotic vs. protic solvents). The solvation values for cations  $^{100}$  would predict a smaller protic vs. aprotic difference, but the methanol vs. dimethylformamide values place them in the expected order:  $Na^+ < K^+ < Cs^+ < Et_4N^+ < Bu_4N^+$ .

#### III. Experimental Methods

By far the most extensive and useful partition coefficient data were obtained by simply shaking a solute with two immiscible solvents and then analyzing the solute concentration in one or both phases. However, mention should be made of some other fundamentally different techniques.

Occasionally the ratio of solubilities in two separate solvents has been measured and reported as a partition coefficient. 101 This is truly a value of P only at saturation and is apt to be quite different from the value obtained under the conditions of low solute concentration and with the two phases mutually saturated. As seen from Table VIII, the amount of water soluble in many solvents can be quite high and this modifies their solvent character considerably. Rather high concentrations of organic solutes are necessary to saturate many solvents. Not only does this make for greater solute-solute interactions, but such high concentrations actually change the character of the organic phase so that one is no longer dealing with, say, butanol as the organic phase but with some mixed solvent. However, if the information desired relates to miscible solvents, 99,100 then there is little choice in the matter. An extensive study has been made of the solubility ratios of amino acids in a series of alcohols, and this should be consulted for experimental details. 102, 103

Another procedure<sup>104</sup> of limited application is that of placing a volatile solute such as ethanol in a closed system with two other solvents which need not be immiscible. If the concentration of solute is determined in both solutions and if the relation between solute activity and concentration is known in one of the solutions, the dependence of activity on concentration in the other can be inferred. This method, which resembles solvent isopiestic procedures, can be used at low solute concentrations.

A rapid method which employs automatic titration for the determination of partition coefficients of organic bases between immiscible solvents has been described. <sup>105</sup> To an aqueous solution of the base hydrochloride, sufficient standard NaOH

is added to convert about 20% to the free base. The automatic titrator is then operated as a pH-Stat, and, when the immiscible solvent is added and stirred, it removes only free base from the aqueous phase. From the ratio of NaOH added prior to the addition of organic solvent, the partition ratio can be calculated.

Some solutes with surfactant properties cause troublesome emulsions to form between two immiscible solvents. Usually these can be dispersed by centrifugation or long standing or a combination of both. If this fails, diffusion techniques can be used, although they are distressingly time consuming. This methods has yielded results consistent with other procedures. It has also been shown 57 how a partition coefficient can be calculated from the difference between surface and interfacial tensions, but the accuracy is probably not better than an order of magnitude.

It has been mentioned that Craig countercurrent distribution procedures often yield valuable partition coefficient data. However, for purposes of characterizing or separating a particular substance, it is desirable to work with a partition coefficient near 1. This is often accomplished through the use of mixed solvents. Also, when a clean separation of solute compounds is desired, concentrated buffers are used to give maximum shift of P with pH. As a result, many of the partition coefficients calculated from Craig procedures have little comparative value because the solvent is unique or because the aqueous phase is at high ionic strength.

A perusal of the literature reveals that many different techniques have been employed for the simple problem of mixing and separating the two phases in order to obtain an equilibrium distribution of the solute. Many workers have used periods of shaking as long as an hour or more. Such a lengthy procedure is unnecessary. It has been found107 that simple repeated inversion of a tube with the two phases establishes equilibrium in 1-2 min. With almost all of the many substances studied by these authors, equilibrium was reached with 50 inversions. Experience in our laboratory has shown that about 100 inversions in roughly 5 min produce consistent results. Very vigorous shaking should be avoided since this tends to produce troublesome emulsions. The clarity of the two phases is not a dependable criterion of the absence of an emulsion, and therefore a centrifugation step is recommended for precise determinations. This cannot be overemphasized. For convenience, partitioning can be carried out in 250-ml centrifuge bottles fitted with glass stoppers. In this way centrifugation can be accomplished without transfer of material. Avoiding cork or rubber stoppers eliminates the possibility that impurities might be introduced by these materials or that some substances might be extracted by such stoppers. Since it is desirable to work at low concentrations in each phase (0.01 M or less), small amounts of impurities can cause serious error.

In measuring about 800 partition coefficients between water and octanol we have usually analyzed the solute in only one phase and obtained the concentration in the other by difference. However, if there is the possibility that absorption to glass may occur, both phases must be analyzed. Such absorption has been found to occur with ionic solutes. 108 Ab-

<sup>(100)</sup> R. Alexander, E. C. F. Ko, A. J. Parker, and T. J. Broxton, J. Amer. Chem. Soc., 90, 5049 (1968).

<sup>(101)</sup> B. Wroth and E. Reid, ibid., 38, 2316 (1916).

<sup>(102)</sup> E. Cohn and J. Edsal, "Proteins, Amino Acids and Peptides," Reinhold, New York, N. Y., 1943, p 200.

<sup>(103)</sup> T. McMeekin, E. Cohn, and J. Weare, J. Amer. Chem. Soc., 58, 2173 (1936).

<sup>(104)</sup> S. D. Christian, H. E. Affsprung, J. R. Johnson, and J. D. Worley, J. Chem. Educ., 40, 419 (1963).

<sup>(105)</sup> A. Brandstrom, Acta Chem. Scand., 17, 1218 (1963).

<sup>(106)</sup> L. Craig, G. Hogeboom, F. Carpenter, and V. DuVigneaud, J. Biol. Chem., 168, 665 (1947).

<sup>(107)</sup> Reference 22, p 159.
(108) J. Fogh, P. O. H. Rasmussen, and K. Skadhauge, Anal. Chem., 26, 392 (1954).

sorption may also be a serious problem when working with very low concentrations of labeled compounds ( $<10^{-6} M$ ).

It is quite helpful to estimate the partition coefficient in advance of the determination (see section V). This allows one to make a more judicious estimate of the volumes of solvents to employ. With very lipophilic molecules, for example, it is evident that relatively small volumes of nonpolar solvent must be used or there will be insufficient material left in the aqueous phase for analysis. For example, if a solute is thought to have a P value of 200, and 20 mg was partitioned between equal 100-ml volumes, the aqueous phase would end up with only 0.1 mg. If the analytical procedure has an inherent error of 0.05 mg/100 ml, the P value could vary between 133 and 400. If, however, 200 ml of water and 5 ml of nonpolar solvent were used, the water layer would contain 3.5 mg or 1.75 mg/100 ml and the same analytical accuracy would limit the range of P values from 194 to 206. With good analytical procedures and proper volume choices of solvent,  $\log P$  values in the range -5 to +5 can be measured.

As pointed out in section II.C, many partitioning systems show temperature dependence of about 0.01 log unit/deg in the room-temperature range. Obviously, temperature control is essential for highest accuracy and is most important for the more miscible systems. For most applications, especially as an extrathermodynamic parameter for biological structure-activity relationships, variations due to temperature are hardly comparable to those inherent in the other measurements, and therefore we do not consider it a serious shortcoming that most of the values in Table XVII are simply "at room temperature" without an estimation of what that might be.

#### IV. Linear Free-Energy Relationships among Systems

Since partition coefficients are equilibrium constants, it should not be surprising that one finds extrathermodynamic 109 relationships between values in different solvent systems. Such an assumption was implicit in the work of Meyer<sup>25</sup> and Overton<sup>26</sup> who used oil-water partition coefficients to correlate the narcotic action of drugs. Smith46 also showed the possibility of such relationships, but Collander<sup>5</sup> was the first to express the relationship in precise terms.

$$\log P_2 = a \log P_1 + b \tag{32}$$

Working with only his own partitioning data, Collander examined only the linear relationship between similar solvent systems. In particular, he showed that eq 32 held between the systems isobutyl alcohol-water, isopentyl alcoholwater, octanol-water, and oleyl alcohol-water. Hansch, 110 using Smith's data, later extended the comparison of relatively nonpolar systems using CHCl3-water for P1 and the following systems for P2: CCl4, xylene, benzene, and isoamyl acetate.

The most useful relationships for the study of solute-solvent interactions are obtained by defining a reference system and making it the independent variable,  $P_1$ , in a set of equations of the form of eq 32. Most of the reasons behind our choice of octanol-water as the reference system have already been given, but another practical one is the fact that it is the system with the largest number of measured values containing the widest selection of functional groups. Furthermore, a large portion of these measurements have been made in one laboratory, and therefore should be more self-consistent.

It is clearly evident from Smith's data46 that, when the nonpolar phases of the partitioning systems differ widely, and especially when the solute sets contain molecules which cannot hydrogen bond along with those which can, eq 32 does not give a good correlation. For example, in comparing benzene-water with octanol-water, 52 assorted solutes give a regression equation with a poor correlation coefficient (0.81) and high standard deviation (0.55).

It might seem feasible to place all solutes in the order of a ratio of P values from two standard systems and group them, if possible, on this basis. This can be useful when the objective, for example, is limited to a comparison of Lewis acid strengths by using the ratio of P values between a saturated and unsaturated solvent system, hexane vs. p-xylene.111 Sandell112 used a similar ratio from the CHCl3 and diethyl ether systems to reach some general conclusions about the relative percentage of tautomeric forms of various solutes, but this simplified system failed when applied to certain specific cases. For example, it erroneously predicted a sizable concentration of imino form in a solution of benzenesulfonamide. 113 Infrared spectroscopy data 114,115 appear to directly contradict this conclusion.

It appeared that the simplest way to make such a separation of solute types was to take the values from a single equation and separate all the "minus deviants" into one category and the "plus deviants" into another. After one has done this for several solvent systems, one finds that the strong hydrogen bond donors are the "minus deviants" and the hydrogen bond acceptors are the "plus deviants." The ether-water system is exceptional, for while it also segregates the donors from acceptors, the deviations are reversed.

Some work has been done to establish a scale of values for H donors116 and H acceptors,117 but these cover only a small fraction of the solutes appearing in Table XVII. A reasonable alternative was to place some of the more common functional groups into "general solute classes" which would be compatible with the "plus deviant" and "minus deviant" catagories as indicated by regression analysis. These classes also had to be compatible with the well-known rules based on the electronegativity and size of the two atoms bound by the hydrogen atom;118 see Table VII.

It is to be expected that some changes in molecular structure outside of the functional group will have important effects on H bonding, sufficient at times to change the assigned solute class. Examples of this situation which have been allowed for are seen in no. 5 and 13, but others can be expected also.

Whenever a solute molecule contained two or more noninteracting functional groups, each of which would require classification as "A" and "B", we have placed it in the class

<sup>(109)</sup> J. E. Leffler and E. Grunwald, "Rates and Equilibria of Organic Reactions," Wiley, New York, N. Y., 1963.

<sup>(110)</sup> C. Hansch, Farmaco, Ed. Sci., 23, 294 (1968).

<sup>(111)</sup> R. Orye, R. Weimer, and J. Prausnitz, Science, 148, 74 (1965).

<sup>(112)</sup> K. Sandell, Naturwissenschaften, 53, 330 (1966).

<sup>(113)</sup> K. Sandell, Monatsh. Chem., 92, 1066 (1961).

<sup>(114)</sup> J. Adams and R. G. Shepherd, J. Org. Chem., 31, 2684 (1966).

<sup>(115)</sup> N. Bacon, A. J. Boulton, R. T. Brownlee, A. R. Katritzky, and R. D. Topsom, J. Chem. Soc., 5230 (1965).

<sup>(116)</sup> T. Higuchi, J. Richards, S. Davis, A. Kamada, J. Hou, M. Nakano, N. Nakano, and I. Pitman, J. Pharm. Sci., 58, 661 (1969).

<sup>(117)</sup> R. W. Taft, D. Gurka, L. Joris, P. von R. Schleyer, and J. W. Rakshys, J. Amer. Chem. Soc., 91, 4794, 4801 (1969).

<sup>(118)</sup> G. Pimentel and A. McClellan, "The Hydrogen Bond," Reinhold, New York, N. Y., 1960, p 229.

# Table VII General Solute Classes

#### Group "A" Acids H donors 2. Phenols 3. Barbiturates 4. Alcohols 5. Amides (negatively substituted, but not di-N-substituted) 6. Sulfonamides 7. Nitriles 8. Imides 9.ª Amides Group "B" 10.4 Aromatic amines (not di-N-substituted) H acceptors 11. Miscellaneous acceptors 12. Aromatic hydrocarbons 13. Intramolecular H bonds<sup>b</sup> 14. Ethers 15. Esters 16. Ketones 17. Aliphatic amines and imines 18. Tertiary amines (including ring N compounds)

<sup>e</sup> Classes 9 and 10 must be reversed when considering the ether and oil solvent systems, <sup>b</sup> E.g., o-nitrophenol. <sup>e</sup> "Neutral" in CHCl<sub>3</sub> and CCl<sub>4</sub>.

which gave the best fit with that particular equation. It was felt that the best fit of the data would serve to categorize the dominant solvation forces in such cases. For example, pmethoxybenzoic acid is both an acid (class 1) and an ether (class 14). Regression equation "A" gave the best fit in the solvent systems: benzene, toluene, and xylene (see Table VIII). This suggests that the H-donor ability of the carboxyl group dominates in placing p-methoxybenzoic acid in the most poorly accommodated category when these solvents are compared to octanol. In the CHCl3-water system, however, p-methoxybenzoic acid is not so poorly accommodated (again in relation to the standard reference system), and actually the "N" equation fits it as well as the "A" (Table VIII). This suggests that the weak H-donor capability of the solvent, CHCl<sub>3</sub>, increases the accommodation of this solute by interacting with the ethereal oxygen.

Once a practical basis for sorting solutes was available, we could study the set of equations (of the form of eq 32) relating the solvent systems to see if the slope and intercept values could give some indication of the solute-solvent forces at work. In doing so, it was convenient to establish some sort of preliminary order to the solvent systems. Although the dipole moment, the dielectric constant, the solubility parameter, 119-122 and the molar attraction constant have each been useful in establishing a scale for solvents in certain applications, none seemed to put partitioning solvent systems into a sensible order. A simple scheme which did work was to order them according to the amount of water they contained at saturation. In Table VIII they appear in this order.

In using the slopes and intercepts of the equations of Table VIII to study solute-solvent interactions as compared to the standard solute-octanol interaction, we can consider the

slope value first. We can see that it is a measure of the solvent system's sensitivity to changes in lipophilicity of solutes. Butanol—water, as expected, has the lowest slope value and the least sensitivity. When this pair is saturated with one another, they are about as much alike as two separate phases can be. Since log P measures the difference in transfer energy between the two, changes in solute character will register as only small differences when compared to octanol.

Increasing the hydrocarbon chain length in the solvent alcohol increases the dissimilarity of the alcohol-water phases, and there is an increased sensitivity to solute changes. Apparently, a maximum sensitivity is reached at octanol for the slope in the oleyl alcohol equation is also 1.0.

There is some basis for the postulate that the partitioning process, outside of hydrogen bonding, is the same for solutes in each system, and therefore if hydrogen bonding were accounted for separately, the slopes of all the equations in Table VIII would be near 1.0. Some of the results reported by Higuchi and his coworkers<sup>116</sup> can be interpreted in this manner. They have used the cyclohexane—water system where the organic phase has a minimum of hydrogen-bonding ability, and to it have added a small amount of tributyl phosphate (TBP) or isopropoxymethyl phosphoryl fluoride (sarin) as H-bond acceptors. By partitioning a set of substituted phenols between the two phases they have calculated an equilibrium constant for the solute—TBP complex. Table IX contains their data and log  $P_{\text{octanol}}$  values for the phenols, and from it eq 33 and 34 have been formulated. The correlation be-

tween partition coefficients in octanol and cyclohexane is poor, as shown by eq 33. However, when correction is made for the hydrogen-bonding ability of the phenols by adding a term in log  $K_{\rm HB}$ , a good correlation is obtained (eq 34). Moreover, the coefficient with log  $P_{\rm cyclohexane}$  is 1.00, indicating that in a rough sense the desolvation processes are the same for each system.

It is reasonable to propose that decreasing the lipophilic character of the nonaqueous phase decreases the energy required to transfer a hydrocarbon solute (or a specific segment of a solute, such as a methylene group) from the nonaqueous to the aqueous phase, and this would result in a decrease in the slope values in Table VIII in going from octanol to butanol. It would be logical to predict, therefore, that any alteration of the aqueous phase in these partitioning systems to make it more like the nonaqueous would also reduce the transfer energy and lower the slope.

There are not a great deal of data in the literature which are suitable for testing this hypothesis, but the investigations of Feltkamp<sup>125</sup> certainly support it. He measured the distribution of various barbiturates between diethyl ether and a 50:50 mixture of dimethylformamide and water. Since DMF itself is not very well accommodated by ether ( $\log P_{\text{ether-water}}$ 

standard solute-octanol interaction, we can consider the

(119) J. H. Hildebrand and R. L. Scott, "The Solubility of Nonelectrolytes," 3rd ed, Reinhold, New York, N. Y., 1950.

<sup>(120)</sup> L. J. Mullins, Chem. Rev., 54, 289 (1954).

<sup>(121)</sup> S. Khalil and A. Martin, J. Pharm. Sci., 56, 1225 (1967).

<sup>(122)</sup> J. A. Ostrenga, ibid., 58, 1281 (1969).

<sup>(123)</sup> P values for all of the solutes used to develop the equations are listed in J. Org. Chem., 36, 1539 (1971), microfilm edition.

<sup>(124)</sup> D. Burton, K. Clark, and G. Gray, J. Chem. Soc., 1315 (1964).

<sup>(125)</sup> H. Feltkamp, Arzneim.-Forsch., 15, 238 (1965).

Table VIII

Solvent Regression Equations<sup>128</sup>

Log  $P_{\text{solv}} = a \text{ Log } P_{\text{outanol}} + b$ 

—H <sub>2</sub> O concn at saturation— Solvent			H-donor soi -Equation "			H-acceptor solutes Equation "B"				
$(vs. H_2O)$	10°M	a <sup>a</sup>	b <sup>a</sup> n	11 r	5	a b	n	r	s	
Cyclohexane	2.5	0.675 - 1.8	342 26	0.761	0.503	1.063 - 0.734	30	0.957	0.360	
•		(±0.24) (±0				(±0.12) (±0.25)	)			
Heptane	3.3	1.056 - 2.8	351 10	0.764	0.916	1.848 - 2.223	11	0.954	0.534	
•		(±0.73) (±1	.46)			$(\pm 0.44)$ $(\pm 0.93)$	)			
CCl4b	10.0	1.168 - 2.1	63 24	0.974	0.282	1.207 - 0.219	11	0.959	0.347	
		(±0.12) (±0	).15)			$(\pm 0.27)$ $(\pm 0.37)$	)			
Xylene	18.8	0.942 - 1.6	594 19	0.963	0.225	1.027 - 0.595	21	0.986	0.230	
		(±0.13) (±0	0.21)			$(\pm 0.08)$ $(\pm 0.16)$	)			
Toluene	25.6	1.135 - 1.7	77 22	0.980	0.194	1.398 - 0.922	14	0.971	0.274	
		(±0.11) (±0	1.16)			$(\pm 0.22)$ $(\pm 0.37)$	)			
Benzene	26.0	1.015 - 1.4	02 33	0.962	0.234	1.223 - 0.573	19	0.958	0.291	
		$(\pm 0.11)$ $(\pm 0.11)$	1.14)			$(\pm 0.19)$ $(\pm 0.20)$	)			
CHCl <sub>3</sub> ¢	68.4	1.126 - 1.3	43 28	0.967	0.308	1.276 + 0.171	21	0.976	0.251	
		(±0.12) (±0	1.21)			$(\pm 0.14)$ $(\pm 0.17)$	)			
Oils <sup>d</sup>	72.5	1.099 - 1.3	10 65	0.981	0.271	1.119 - 0.325	14	0.988	0.233	
		(±0.06) (±0	).0 <b>9</b> )			(±0.11) (±0.19)	)			
Nitrobenzene	180	1.176 - 1.0	72 9	0.977	0.217					
		(±0.23) (±0	. 20)							
Isopentyl acetate	456	1.027 + 0.0	72 22	0.986	0.209					
		$(\pm 0.08)$ $(\pm 0.08)$								
Ether	690	1.130 - 0.1	70 71	0.988	0.186	1.142 - 1.070	32	0.957	0.326	
		(±0.04) (±0	).05)			$(\pm 0.13)$ $(\pm 0.12)$	)			
			"Sa	ole" Equati	on					
Oleyl alcohol	712	0.999 - 0.5	75 37	0.985	0.225					
•		$(\pm 0.06)$ $(\pm 0.06)$	. 11)							
Methyl isobutyl	950	1.094 + 0.0	50 17	0.993	0.184					
ketone		$(\pm 0.07)$ $(\pm 0.07)$	.11)							
Ethyl acetate	1620	0.932 + 0.0	*	0.969	0.202					
		(±0,21) (±0	. 18)							
Octanol	2300	1.000 + 0.0	00							
Cyclohexanone	4490	1.035 + 0.8	96 10	0.972	0.340					
		(±0.20) (±0								
Primary pentanols	5000°	0.808 + 0.2		0.987	0.161					
• •		(±0.07) (±0	).0 <del>9</del> )							
sec- and tert-	5320/	0.892 + 0.2	88 11	0.996	0.091					
pentanols		(±0.06) (±0	.06)							
2-Butanone	5460	0.493 + 0.3	•	0.987	0.093					
		(±0.07) (±0								
Cyclohexanol	6510	0.745 + 0.8		0.985	0.100					
-		(±0.09) (±0								
Primary butanols	9440	0.697 + 0.3		0.993	0.123					
·		(±0.02) (±0								

<sup>°</sup> The values in parentheses are the 95% confidence intervals. b The "N" equation is  $\log P_{\text{CCl4}} = 0.862 ~(\pm 0.60) ~\log P_{\text{octanol}} - 0.626 ~(\pm 0.70) ~(n = 6, r = 0.809, s = 0.462)$ . The "N" equation is  $\log P_{\text{CHCl3}} = 1.10 ~(\pm 0.09) ~\log P_{\text{octanol}} - 0.617 ~(\pm 0.12) ~(n = 32, r = 0.974, s = 0.254)$ . Most liquid glyceryl triesters fit this equation; olive, cottonseed, and peanut oils were the most frequently used. n-Amyl alcohol = 5.03 M in water; isoamyl alcohol = 4.50 M in water. Water content measured for 2-pentanol only. Water content measured for 1-butanol only.

=-1.62), it should not greatly change the solvent properties of the water-saturated ether phase, but it must greatly reduce the protic nature of the aqueous phase. The following equation was derived using this rather limited set of solutes.

$$\log P_{\text{ether/H}_2\text{O-DMF}} = -0.321 + 0.400 \log P_{\text{ootanol}} \\
n r s \\
6 0.988 0.058$$

The equation with two additional values for hexobarbital and phenobarbital was essentially the same (slope = 0.405)

even though these poorly predicted solutes lowered the value of r to 0.86. It is apparent that this drastic reduction in the protic character of the aqueous phase has reduced the sensitivity of the ether-water system to changes in lipophilicity of solutes by a factor of 2.8 (i.e., 1.13/0.4). Diethylformamide, by disrupting the water envelope around a nonpolar solute, in all probability reduces the entropy factor in phase transfer.

The *intercept* value for each of the regression equations in Table VIII can be used as a measure of the lipophilicity of the solvent in a slightly different fashion. It is apparent that the intercept value in the equation for a given solvent system

Table IX

Relationship between Phenol Partition
Coefficients in Octanol and Cyclohexane

Phenol	$Log \ P_{ ext{cyclohexane}^a}$	Log K <sub>HB</sub> <sup>b</sup>	$egin{aligned} Obsd^c \ Log \ P_{ ext{octanol}} \end{aligned}$	Calcdd Log Pootanol	$ \Delta \log P $
Unsubstituted	-0.85	0.00	1.46	1.50	0.04
4-Me	-0.14	-0.16	1.94	2.02	0.08
4-Et	0.40	-0.11	2.44	2.62	0.18
4-tert-Butyl	1.12	-0.27	3.31	3.15	0.17
3-F	$-0.85^{124}$	0.39	1.93	1.97	0.04
4-F	-1.00	0.24	1.77	1.64	0.14
4-Cl	$-0.70^{124}$	0.48	2.39	2.24	0.16
4-NO <sub>2</sub>	-1.93	1.33	1.96	2.01	0.05
2,3-(CH) <sub>4</sub>	0.52	0.16	2.98	3.06	0.08

<sup>a</sup> Some values are average of two determinations; see Table XVII. <sup>b</sup> From ref 117. <sup>c</sup> From ref 10 and 58. <sup>d</sup> Calculated using eq 34.

is the log P for any solute which is distributed equally between water and octanol; i.e.,  $\log P_{\rm octanol} = 0$ . Thus a negative intercept for any equation indicates that the solvent is more lipophilic than octanol, and a positive intercept indicates that it is more hydrophilic. This is more readily apparent if one examines a homologous series of solutes, for example, the carboxylic acids. The octanol  $\log P$  values begin at -0.54 for formic and rise to -0.17 for acetic and to +0.33 for propionic. Therefore, it takes between two and three lipophilic methylene groups to balance the hydrophilic carboxyl group and allow the octanol to share the solute equally with water.

In the oleyl alcohol-water system, it takes one additional methylene group before a carboxylic acid becomes lipophilic enough to be equally shared; i.e.,  $\log P_{\text{oleyl alc}} = 0$  between propionic and butyric. Similarly, it is noted that in nitrobenzene-water it takes two additional methylenes, in benzene-water it takes three, and in  $CCl_4$ -water it takes about 4.5 additional groups to bring the solute to an equal lipophilic level with the organic phase.

Using the intercept values from the "A" or "sole" equation as a measure of the solvent's lipophilicity, we see that there is a very good correlation between these values and the water content at saturation.

log (H<sub>2</sub>O) = 1.077[intercept] + 0.249 (35)  

$$n$$
  $r$   $s$   
17 0.979 0.217

Sometimes it may be misleading to think of a scale of "lipophilicity" as the simple reciprocal of a "hydrophilicity" scale, but eq 35 shows that the *inability* of a partition solvent to "accommodate" water is a good measure of its lipophilic behavior toward a great assortment of organic solutes.

A more complex kind of partition, but one which can be studied by means of linear regression equations similar to those in Table VIII, is that of the distribution of small organic molecules between proteins and an aqueous phase. A large number of such examples are known which can be correlated by an equation similar to eq 32.

$$\log K = a \log P + b \tag{36}$$

In eq 36, K is an equilibrium constant measuring the binding of the small solute molecule by protein. In some work, the expression  $\log (B/F)$  has been used instead of K. B

represents the per cent of small molecules partitioned onto the protein, while F is the per cent of small molecule in the aqueous phase. A number of such examples are given in Table X.

In other examples the binding constant is expressed as 1/C where C is the molar concentration of small molecule necessary to produce a 1:1 (or higher, as indicated) complex of protein and small molecule.

The way the binding constant is defined greatly affects the intercepts listed in Table X so that only those defined in the same way can be compared. The slopes, however, differ very little regardless of the system, the type of compound studied, or the way in which the binding constant is defined.

Omitting the slopes for examples 1, 2, and 9 where the work was done at  $4^{\circ}$  (since it is known the slopes for the Hammett-type relationships are higher at lower temperatures), and omitting the rather deviant value of example 12, we are left with a set of 14 slopes with a mean value and standard deviation of  $0.55 \pm 0.06$ . This is amazingly constant considering the variations in conditions. The relationship between the results in Table X and those of Table VIII calls for further careful analysis. None of the slopes in Table VIII are as low as 0.54; the lowest for a carefully studied system is that of the butanols (0.72). In this sense, butanols behave more like the proteins than the other solvents of Table VIII. In fact, Scholtan 130 has shown that the binding of many drugs to serum protein follows the relationship

$$\log K = 0.9 \log P_{i\text{-BuOH}} + \text{constant}$$
 (37)

In eq 37, there is almost a 1:1 relationship between the logarithms of the two kinds of equilibrium constants. In this limited sense butanol, saturated with water, resembles a protein in structure.

Of course, in actual fact, saturated butanol which contains a greater number of water molecules than butanol molecules, is not at all like a protein. If the main driving force in the transfer from water into octanol or onto a protein is desolvation of the water about the solute, then we can postulate that the degree of desolvation must be about the same in each process. In the case of butanol, the solute molecule, in entering the butanol phase, finds itself in a rather aqueous environment. While the structure of the "flickering clusters" around the solute must be largely broken up in butanol, more such structures must be present than in solvents such as octanol or benzene. In the case of the proteins of Table X, since the weighting factor with the  $\log P_{\text{octanol}}$  term is 0.5, one could postulate that only half as much desolvation occurs on the average in partitioning onto a protein as into octanol; that is, for a given increment in hydrophobicity (say, a phenyl group), the driving force for partitioning onto protein is only half of that of partitioning into octanol. One way of rationalizing this is to postulate that the solute molecules are partitioned onto the surface of the protein and in this way only partially desolvated. This seems a more logical explanation than to assume that they are completely engulfed by protein

<sup>(126)</sup> C. Hansch in "Drug Design," Vol. 1, E. J. Ariens, Ed., Academic Press, New York, N. Y., 1971, p 271.

<sup>(127)</sup> A. E. Bird and A. C. Marshall, Biochem. Pharmacol., 16, 2275 (1967).

<sup>(128)</sup> C. Hansch and F. Helmer, J. Polym. Sci., Part A-1, 6, 3295 (1968).

<sup>(129)</sup> J. M. Vandenbelt, C. Hansch, and C. Church, unpublished results. (130) W. Scholtan, Arzneim.-Forsch., 18, 505 (1968).

Table XPartitioning of Organic Compounds between Proteins and Aqueous Phase

	Partitioning of Organic Compounds between Proteins and Aqueous Phases									
. 7	Type of compound	$Macromolecule^a$	<b>K</b> ⁵	а	<i>b</i>	n	r	s	Ref	T, °C
1.	Miscellaneous	BSA (1:1)	1/C	0.75	2.30	42	0.960	0.159	9	4
2.	Miscellaneous	BSA (3:1)	1/C	0.59	2.03	16	0.900	0.133	9	4
3.	Barbiturates	BSA (1:1)	1/C	0.58	2.40	4	0.961	0.137	9	RT
4.	Barbiturates	BSA	B/F	0.51	-1.22	17	0.896	0.181	126	RT
5.	RCOO-	BSA	K	0.59°	-6.51	5	0.966	0.213	9	23
6.	Miscellaneous	BSA (1:1)	1/C	0.67	2.48	25	0.945	0.242	129	37
7.	Penicillins	Human serum	B/F	0.49°	-0.63	79	0.924	0.134	127	~22
8.	Thyroxine analogs	Albumin	K	0.46°	2.59	8	0.950	0.237	126	37
9.	Miscellaneous	Hemoglobin	1/C	0.71	1.51	17	0.950	0.160	9	4
10.	ROH	Ribonuclease	K	0.50	-1.56	4	0.999	0.012	9	62
11.	Acetamides	Nylon	K	0.69	-7.16	7	0.961	0.203	128	26.5
12.	Acetanilides	Rayon	K	0.84	-7.24	7	0.967	0.227	128	26.5
13.	Barbiturates	Liver <sup>d</sup>	B/F	0.52	-1.14	5	0.973	0.124	126	RT
14.	Barbiturates	Heart <sup>d</sup>	B/F	0.62	-1.48	5	0.950	0.207	126	RT
15.	Barbiturates	Kidney <sup>a</sup>	B/F	0.53	-1.42	5	0.962	0.152	126	RT
16.	Barbiturates	Lungd	B/F	0.56	-1.50	5	0.956	0.173	126	RT
17.	Barbiturates	Brain <sup>d</sup>	B/F	0.52	-1.44	5	0.973	0.125	126	RT
18.	Barbiturates	Muscle <sup>d</sup>	B/F	0.48	-1.45	5	0.970	0.121	126	RT

<sup>&</sup>lt;sup>a</sup> BSA = bovine serum albumin. <sup>b</sup> C = molar concentration; B/F = ratio bound to free; for definition of K, see original article. <sup>c</sup>  $\pi$  values used instead of log P. <sup>d</sup> Homogenized.

(as they are in passing into butanol) but that the "sweater" of outer molecules is not completely stripped from the solute.

There are instances in which the slope relating binding to  $\log P_{\text{ootanol}}$  is 1. For example, the correlation of  $\log 1/K_m$  with  $\log P$  for chymotrypsin substrates<sup>181</sup> and inhibitors is essentially 1 for substituents thought to be binding in the  $\rho_2$  area.  $K_m$  is the Michaelis constant and is an approximate binding constant. Chymotrypsin is known to contain a deep cleft which may constitute the  $\rho_2$  area and, in this instance, complete desolvation of the substituent may occur.

#### V. Additive-Constitutive Properties

It was apparent to Meyer<sup>25</sup> and Overton,<sup>26</sup> as well as the other early workers in the field, that in a homologous series the partition coefficient increased by a factor of from 2 to 4 per CH<sub>2</sub>. Cohn and Edsal<sup>102</sup> verified that this kind of additivity held for the solubility ratios of amino acids in ethanol and water. They also extended it to include values for the groups  $-\text{CH}_2\text{CONH}-$ , OH, SH, and  $\text{C}_6\text{H}_5$ , and for dipolar ionization. Collander<sup>4</sup> determined that  $\Delta P/\text{CH}_2$  fell in the range of 2 to 4 for the ether-water system and 1.8 to 3.0 for the butanol-water system. He also reported a range of values for  $\Delta P$  when the following substitutions were made: OH for H, NH<sub>2</sub> for H, CO<sub>2</sub>H for CH<sub>3</sub>, CO<sub>2</sub>H for CONH<sub>2</sub>, and halogens for H. In view of these long-standing observations, it is surprising that no really systematic effort was made to study the additive character of the partition coefficient until the early 60's.

#### A. DEFINITION OF $\pi$

Additivity was first established for a wide variety of groups in a study of the substituent constant,  $\pi$ , defined in an analogous fashion to the Hammett  $\sigma$  constant

$$\pi_{X} = \log P_{X} - \log P_{H}$$

where  $P_X$  is the derivative of a parent molecule,  $P_H$ , and thus

 $\pi$  is the logarithm of the partition coefficient of the function X. For example,  $\pi_{\text{Cl}}$  could be obtained as follows.

$$\pi_{\rm Cl} = \log P_{\rm chlorobenzene} - \log P_{\rm benzene}$$

# B. SUBSTITUENT FREE ENERGIES AND INTERACTION TERMS

It has been found that  $\pi$  values are relatively constant from one system to another as long as there are no special steric or electronic interactions of the substituents not contained in the reference system. For example, it has been found that  $\pi_{\text{CH}_3}$  for groups attached to various benzene derivatives has a value in the octanol-water system of  $0.50 \pm 0.04$  for 15 different examples. The weak interaction of the methyl group with functions as active as a nitro group is exceptional. Most other  $\pi$  values are not so constant with respect to electronic environment. For example, in 15 examples of  $\pi_{NO_2}$  in aromatic systems,  $\pi$  had a mean value and standard deviation of 0.01  $\pm$  0.32.

The function  $\pi$  is best viewed in extrathermodynamic terms. The symbols H-N-H and X-N-H can be used to represent a solute nuclei (N), the first one unsubstituted and the other containing the substituent X. The parameter  $\pi$  can then be defined by a comparison of two equilibria

The superscripts H and L denote the hydrophilic (H<sub>2</sub>O) and lipophilic (solvent) phases and refer to the phase in which the molecule is located.

$$\pi = \log K_2/K_1$$

That is, the ratio of the equilibrium constants is equivalent to the equilibrium constant for the reaction

$$X-N-H^{H} + H-N-H^{L} \longrightarrow X-N-H^{L} + H-N-H^{H}$$
 (38)

The free energy change resulting from the introduction of X on the first of the above equilibria would be

$$2.3RT \log K_2/K_1 = G_{X-N-H^L} + G_{H-N-H^H} - G_{K-N-H^H} - G_{H-N-H^L}$$
(39)

If we assume that the free energy of an individual molecule in eq 38 can be represented as the sum of its parts and their interaction, we may write

$$G_{X-N-H}^{L} = G_{X}^{L} + G_{N}^{L} + G_{H}^{L} + G_{XN}^{L} + G_{HN}^{L} + G_{XH}^{L}$$
 (40)

In eq 40, the terms on the right represent the free energies of the substituents X or H and their interactions with the basic structure N  $(G_{XN}^L)$  or each other  $(G_{XH}^L)$ . Formulating the other molecules in this fashion and substituting into eq 39 yields

2.3RT log 
$$K_2/K_1 = G_{X^L} + G_{XN^L} + G_{H^L} + G_{H^H} + G_{H^H} + G_{H^H} + G_{H^H} - G_{X^H} - G_{H^L} - G_{H^L} - G_{H^L} - G_{H^L}$$
 (41)

Making substitutions of the type  $G_X^L - G_X^H = \Delta G_X$ , eq 41 is converted to

2.3RT log 
$$K_2/K_1 = \Delta G_X + \Delta G_{XN} + \Delta G_{XH} - \Delta G_{HN} - \Delta G_{HN} - \Delta G_{HH}$$
 (42)

If the interaction terms can be neglected, then

$$\pi = 2.3RT \log K_2/K_1 = \Delta G_X - \Delta G_H \tag{43}$$

When two functions are involved, the following equilibria must be considered.

$$\begin{array}{c}
H \\
H-N-Y & \stackrel{K_3}{\longrightarrow} & L \\
H-N-Y & \stackrel{}{\longrightarrow} & H-N-Y \\
K_3 = (H-N-Y)^L/(H-N-Y)^H
\end{array}$$
(44)

$$X-N-Y \xrightarrow{K_4} X-N-Y$$

$$K_4 = (X-N-Y)^L/(X-N-Y)^H$$
(45)

Equation 46 can then be derived from eq 44 and 45.

$$\pi = 2.3RT \log K_4/K_3 = \Delta G_X + \Delta G_{XN} + \Delta G_{XY} - \Delta G_{HY} - \Delta G_{H} - \Delta G_{HN}$$
 (46)

Subtracting eq 43 from 46 yields

$$\Delta \pi = \Delta G_{XY} + \Delta G_{HH} - \Delta G_{HY} - \Delta G_{XH} \tag{47}$$

extended indefinitely and that, for the present, one is limited to the use of model systems working outside of classical thermodynamics.

It has been shown 10 that the difference in  $\pi$  constants from two different systems is highly dependent on electronic interactions. This is illustrated by eq 48–51 in which the Hammett function, 100  $\sigma$ , is the measure of electronic interaction. A good correlation is obtained with phenols in eq 48. The positive coefficient with  $\sigma$  indicates that an electron-withdrawing substituent, X, will be relatively better accommodated by octanol when it is moved from benzene to phenol. Surprisingly enough, a poorer correlation is obtained using  $\sigma^-$ . The reason for this may be that the linear relationship between  $\Delta \pi$  and  $\sigma$  does not cover a very wide range of  $\sigma$  values. For example, placing two nitro groups on phenol yields a negative  $\Delta \pi$  rather than a positive  $\Delta \pi$  obtained for mononitro functions in eq 48.

#### 1. Inductive Effect

Relatively little systematic effort has been expended studying systems in which the inductive effect of one substituent on another can be cleanly dissected away from other effects.

It is clear in the benzyl alcohols correlated by eq 49 that electron-withdrawing substituents increase  $\log P$  values relative to benzene. For example

$$\pi_{\text{NO}_2} = \log P_{\text{nitrobenzene}} - \log P_{\text{benzene}} = -0.28$$

$$\pi_{\text{NO}_2} = \log P_{\text{4-nitrobenzyl slc}} - \log P_{\text{benzyl alc}} = 0.11$$

In this example it seems unlikely that the primary effect on  $\pi$  is the action of CH<sub>2</sub>OH on NO<sub>2</sub>; it seems more reasonable to assume that the electron-withdrawing action of NO<sub>2</sub> on the region near the OH function is responsible for  $\Delta\pi$  of 0.39. The inductive effect of the nitro group which is insulated from the OH by the CH<sub>2</sub> unit is apparently making the lone-pair electrons of the OH function less available for hydrogen bonding lowering the affinity of this function for the water phase. This same effect is quite apparent with anilines and phenols bearing electron-withdrawing functions. While the inductive withdrawal of electrons from the region of a function containing lone-pair electrons often raises its  $\pi$  value, this is not always so.  $\pi_{\text{Cl}}$  from the benzene system is 0.71, while  $\pi_{\text{4-Cl}}$  in the nitrobenzene system is only 0.54, and  $\pi_{\text{3-cl}}$  is 0.61.

That the inductive effect is quite small with alkyl groups is illustrated by eq 52 and 53.

$$n r s$$

$$\Delta \pi = \pi_{\text{phenol}} - \pi_{\text{benzene}} = 0.82\sigma + 0.06 24 0.954 0.097 (48)$$

$$\Delta \pi = \pi_{\text{benzyl alc}} - \pi_{\text{benzene}} = 0.47\sigma + 0.04$$
 11 0.937 0.086 (49)

$$\Delta \pi = \pi_{\text{phenoxyacetic acid}} - \pi_{\text{benzene}} = 0.36\sigma + 0.04$$
 22 0.754 0.100 (50)

$$\Delta \pi = \pi_{\text{nitrobensene}} - \pi_{\text{bensene}} = -0.51\sigma + 0.28$$
 20 0.676 0.250 (51)

For  $\Delta\pi$  to equal or approach 0, the four interaction terms must be equal to or approach 0. (There is of course the unlikely case where they might cancel each other so that  $\Delta\pi$  = 0.) As the number of changes in the systems under comparison becomes larger, so do the interaction terms, and hence the possibility that  $\pi$  from very different systems will remain constant becomes less likely. It is apparent from this analysis that the approach of Cratin<sup>61</sup> (see section II.C) cannot be

$$\pi_{\text{CH}_2} = \log P_{\text{EtNO}_2} - \log P_{\text{MeNO}_2} = 0.18 - (-0.33) = 0.51 \quad (52)$$

$$\pi_{\text{CH}_2} = \log P_{\text{PrNO}_2} - \log P_{\text{EtNO}_2} = 0.65 - 0.18 = 0.47$$
 (53)

#### 2. Resonance Effect

The effect of electron delocalization on  $\pi$  values is well illus-

trated by the difference between aliphatic and aromatic  $\pi$  values shown in Table XI. The effect of moving functions from

Table XI Comparison of Aromatic and Aliphatic  $\pi$  Values

Function	Aromatic π Log P <sub>C6Hδ</sub> X — log P <sub>C6Hδ</sub>	Aliphatic $\pi$ Log $P_{ m RX}$ — log $P_{ m RH}$	$\frac{\Delta\pi}{\pi_{ar}-\pi_{al}}$
NH <sub>2</sub>	-1.23	-1.19	-0.04
I	1.12	1.00	0.12
S-CH <sub>3</sub>	0.61	0.45	0.16
COCH₃	-0.55	-0.71	0.16
CONH₂	-1.49	-1.71	0.22
COOCH <sub>3</sub>	-0.01	-0.27	0.26
Br	0.86	0.60	0.26
CN	-0.57	-0.84	0.27
F	0.14	-0.17	0.31
Cl	0.71	0.39	0.32
COOH	-0.28	-0.67	0.39
OCH₃	-0.02	-0.47	0.45
$OC_6H_5$	2.08	1.61	0.47
$N(CH_3)_2$	0.18	-0.30	0.48
OH	-0.67	-1.16	0.49
NO <sub>2</sub>	-0.28	-0.85	0.57

aliphatic to aromatic positions is a complex one. The amino group stands out by showing the smallest change, this despite the fact that a large amount of evidence leaves no doubt about the delocalization of the nitrogen lone-pair electrons. The higher  $\pi$  value which should result from this effect is apparently offset by better hydrogen bonding of the two hydrogen atoms which increases affinity for the water phase. When the hydrogen atoms are removed, as in the N(CH<sub>3</sub>)<sub>2</sub> function, we see the expected  $\Delta \pi$  value, that is, one somewhat higher than  $\Delta\pi_{\text{OCH}_3}$ . With the more electronegative oxygen atom this effect is not observed. The largest  $\Delta \pi$  is for NO<sub>2</sub>, and it appeared possible that the acidity of the  $\alpha$ -hydrogen atoms might be playing a role in conferring unusual hydrophilic character to the aliphatic nitro solutes. However,  $\pi_{NO_2}$ was found to be essentially unchanged for the tert-nitro derivative, 2-methyl-2-nitropropane.

With the exception of NH<sub>2</sub>, transferring any function from an aliphatic to an aromatic position results in an increase in lipophilicity. Actually,  $\Delta \pi$  for NH<sub>2</sub> is so small that it can be considered to be 0.

Replacing a single bond with a double bond results in a constant  $\Delta \pi$  of about -0.3. This can be illustrated as follows by comparing  $\pi_{-\text{CH}_2\text{CH}_2-}$  (=1.00) with  $\pi_{-\text{CH}_2\text{CH}_2-}$  derived from five systems (Chart I). If, indeed,  $\log P$  or  $\pi$  is primarily

#### Chart I

$\pi_{\text{-CH-CH-}} = \log P_{\text{CH}_2\text{COCH}_2\text{CH}_2\text{CH-CH}_2} - \log$	
$P_{\text{CH}_3\text{COCH}_2\text{CH}_3} = 1.02 - 0.29 =$	0.73
$\pi_{\text{-CH-CH-}} = \frac{1}{3} \log P_{\text{benzene}} = \frac{1}{3} (2.13) =$	0.71
$\pi_{-\text{CH}-\text{CH}} = \frac{1}{5} \log P_{\text{naphthalene}} = \frac{1}{5} (3.45) =$	0.69
$\pi_{-\text{CH-CH}} = \log P_{\text{CeHsOCH}_2\text{CH-CH}_2} - \log P_{\text{CeHsOCH}_3} =$	
2.94 - 2.11 =	0.83
$\pi_{\text{-CH-CH-}} = \frac{1}{2} (\log P_{\text{diallyl}} - 1.00) = \frac{1}{2} (2.45 - 1.00) =$	0.72
Av =	$\overline{0.73}$
$\Delta \pi = 0$	-0.27

determined (in apolar functions) by the removal of an envelope of structured water molecules, then it is not surprising

that  $\pi_{-CH-CH-}$  is the same in one of the conjugated double bonds in naphthalene as in an isolated double bond in 5-hexen-2-one.

An acetylenic group has a somewhat lower  $\pi$  value.

$$\pi_{-\text{CepCH}} = \log P_{\text{1-pentyne}} - \log P_{\text{C}_3\text{H}_6} = 1.98 - 1.50 = 0.48$$
  
 $\pi_{-\text{CepCH}} = \log P_{\text{C}_6\text{H}_6\text{CepCH}} - \log P_{\text{C}_6\text{H}_6} = 2.53 - 2.13 = 0.40$ 

Conjugation of  $\pi$ -electron systems does not appear to result in big changes in  $\pi$  values even when a heteroatom is included in the system. Table XII illustrates the amount of variance in

Table XII

Constancy of  $\pi$  for -CH=CHCH=CH-

	π_CH_CHCH_CH_
$Log P_{indole} - log P_{pyrrole} = 2.14 - 0.75 =$	1.39
$Log P_{quinoline} - log P_{pyridine} = 2.03 - 0.65$	= 1.38
$\log P_{\text{isoquinoline}} - \log P_{\text{pyridine}} = 2.08 - 0.6$	5 = 1.43
$Log P_{acridine} - log P_{quinoline} = 3.40 - 2.03$	
$\text{Log } P_{\text{dibenzofuran}} - \log P_{\text{benzofuran}} = 4.12 - 2.6$	
$\text{Log} P_{\text{benzothiophene}} - \text{log} P_{\text{thiophene}} = 3.12 - 1.$	81 = 1.31
$Log P_{naphthalene} - log P_{benzene} = 3.45 - 2.13 =$	= 1.32
$^{2}/_{3} \log P_{\text{benzene}} = ^{2}/_{3}(2.13) =$	1.42
$Log P_{\beta-naphthol} - log P_{phenol} = 2.84 - 1.46 =$	1.38
Log Pg-naphthoxyacetic acid - log Pphenoxyacetic ac	id =
2.54 - 1.21 =	1.33
A	$v = \overline{1.38} \pm 0.036$

 $\pi_{\rm -CH-OHCH-CH-}$  in a variety of different aromatic systems. The mean value and standard deviation for the 10 systems is  $1.38\pm0.036$ .

#### 3. Steric Effect

Steric effects can be quite varied in nature. The shielding of lone-pair electrons by inert alkyl groups produces a significant increase in  $\pi$  values.

$$\pi_{\text{CH}_3} = \log P_{\text{2-methylphenoxyacetic acid}} - \log P_{\text{POA}} =$$

$$2.10 - 1.26 = 0.84$$

$$\pi_{\text{CH}_3} = \log P_{\text{3-methylphenoxyacetic acid}} - \log P_{\text{POA}} =$$

$$1.78 - 1.26 = 0.52$$

Shielding a hydroxyl function by inert groups such as 2,6-substituted phenols reduces hydrogen bonding and results in a positive  $\Delta \pi$ . This is most pronounced in the case of a nonpolar solvent system such as cyclohexane. <sup>132,133</sup>

Crowding of functions may also reduce hydrophobic bonding with the opposite effect on  $\Delta \pi$ . For example, pentachlorophenol has a measured log P of 5.01, while its calculated value would be

log 
$$P$$
 = phenol +  $2\pi_{o-c1}$  +  $2\pi_{m-c1}$  +  $\pi_{p-c1}$  =  
1.46 + 1.38 + 2.08 + 0.93 = 5.85

Assuming electronic effects of each Cl atom to be contained in the corresponding  $\pi_{\text{Cl}}$  value,  $\Delta \pi_{\text{storio}} = 5.01 - 5.85 = 0.84$ . Presumably, this would be the result of fewer water

<sup>(132)</sup> C. Golumbic, M. Orchin, and S. Weller, J. Amer. Chem. Soc., 71, 2624 (1949).

<sup>(133)</sup> J. Fritz and C. Hedrick, Anal. Chem., 37, 1015 (1965).

molecules clustered around each chlorine atom in the pentachloro derivative than in the monochloro derivatives.

1,2,3-Trimethoxybenzene is an interesting example of how the steric effect can operate to inhibit resonance and thus decrease  $\pi$ .

$$\log P_{C_6H_3(OCH_3)_3} = \log P_{C_6H_6} + 3\pi_{OCH_3} = 2.13 - 0.06 = 2.07$$

The measured value is 1.53, indicating greater than expected affinity for the water phase. If we assumed that only the central OCH<sub>3</sub> is perturbed and that it is twisted out of the plane of the ring so that resonance between the oxygen lone pair electrons and the  $\pi$  electrons of the benzene ring is prevented, then the central OCH<sub>3</sub> might be expected to have the  $\pi$  value of an aliphatic function. This can be tested as follows.

$$\pi_{\text{OCH}_3} = \log P_{1,2,3-\text{trimethoxybenzene}} -$$

$$\log P_{1.3-\text{dimethoxybenzene}} = 1.53 - 2.09 = -0.56$$

The  $\pi$  value for the "twisted  $-OCH_3$ " (-0.56) is much closer to that of an aliphatic  $OCH_3$  (-0.47) than it is to an ordinary aromatic  $-OCH_3$  (-0.02).

Sometimes the steric effects of alkyl functions on the solubility characteristics of an adjacent carbonyl function can be quantitatively correlated with the Taft  $E_a$  parameter. The partition coefficients of a series of 2-alkyltriazinones are listed in Table XIII along with  $E_a$  values. The calculated log P values

Table XIII
Steric Effect in Triazinones

No.	R	Calcd log Pa	$E_{\rm e}$	Obsd log P	Log P pred by eq 54	Obsd — pred
1.	$CH_a$	-0.16	0.00	-0.16	-0.14	-0.02
2.	$C_2H_5$	0.34	-0.07	0.46	0.41	0.05
3.	n-C₃H <sub>7</sub>	0.84	-0.36	0.93	1.04	-0.11
4.	<i>i</i> -C <sub>3</sub> H <sub>7</sub>	0.64	0.47	1.01	0.88	0.13
5.	i-C <sub>4</sub> H <sub>0</sub>	1.14	-0.93	1.39	1.57	-0.18
6.	tert-C <sub>4</sub> H <sub>9</sub>	0.94	-1.54	1.70	1.60	0.10
7.	$i$ - $C_5H_9$	1.65	-0.35	1.85	1.85	0.00
8.	c-C <sub>6</sub> H <sub>11</sub>	1.81	-0.79	2.14	2.19	-0.05
9.	$n-C_6H_{13}$	2.35	-0.40	2.68	2.59	0.08

<sup>a</sup> The methyl derivative used as the "parent" compound and  $\pi_{alk}$  from either the phenoxyacetic acid or benzene systems used to calculate the "normal" log P values of the remaining compounds.

are those expected from the addition of  $\pi_{alkyl}$  to unsubstituted triazinone. It is apparent that the observed values of Draber, Büchel, *et al.*, <sup>134</sup> are higher. Equation 54 rationalizes this difference in terms of  $E_a$ .

$$\log P_{\text{obsd}} = 1.026 \log P_{\text{caled}} - 0.392E_{\text{m}} + 0.024$$
 (54)

Another instance in which chain branching results in hydrophilic shielding and increases  $\log P$  (contrary to an expected negative  $\Delta \pi$  as explained in the following section) has been reported <sup>135</sup> in the study of a series of dialkylphosphorodithiotic acids. Branching apparently also increases the acid dissociation constant, an effect which would not be expected from electronic forces alone.

Steric shielding of a tertiary nitrogen apparently explains the difference in the partition coefficients between the allo (planar and hindered access to N) and epiallo (N exposed at "bend") isomers of corynantheidine-type alkaloids. <sup>136</sup> In the heptane-water system, the  $\Delta\pi$  for the allo-epiallo transition is +1.07 in one instance and +0.76 in another. However, it is not clear from the proposed structural formulas why there should be a much lower  $\Delta\pi$  comparing the normal (planar) with the pseudo (nonplanar) in two other examples [ $\Delta\pi$ (speciogynine — mitrociliatine) = +0.11;  $\Delta\pi$ (dihydrocorynanthine — hirsutine) = +0.11].

Some care must be exercised in deciding whether a difference in observed partition coefficients between stereoisomers is truly the result of the balance of hydrophilic-lipophilic forces. For example, P values have been measured  $^{137}$  in benzenewater for the exo (P=2.37) and endo (P=4.23) epimers of an analog of meperidine. However, the aqueous phase was buffered at 7.4 and, since the exo form is more basic ( $pK_a=8.35$  vs. 8.19), there is a lower percentage in the un-ionized form. The corrected P values are exo = 29 and endo = 30. The observed lower biological activity of the exo epimer stems from its  $pK_a$ .

#### 4. Branching

A normal aliphatic chain usually has a higher  $\pi$  value than a branched chain. For example,  $\pi_{3\text{-Pr}}=1.45$  and  $\pi_{3\text{-i-Pr}}=1.33$  in the phenoxyacetic acid system. When branching occurs at the functional group, the effect appears to be slightly greater; e.g., tert-BuOH = 0.37, 2-BuOH = 0.61, and 1-BuOH = 0.88. Similarly,  $\log P_{\text{1-PrNH}_2}=0.03$  while  $\log P_{\text{PrNH}_3}=0.31$ . In contrast to this, however, there seems to be no difference between  $\log P$  for isopropylbenzene and propylbenzene. Also, there appears to be no lowering of  $\log P$  in tert-butylbenzene. The observed value of 4.11 is what would be expected for the n-butyl derivative if calculated from the value of 3.68 for propylbenzene. Accepting the fact that some discrepanices remain to be resolved, we have, for the purpose of calculating  $\log P$  values, tentatively used the value of -0.20 for branching.

#### 5. Conformational Effects

Another problem which must be taken into account in the additive-constitutive character of log P is the conformation of organic compounds in solution. It might be expected that when aliphatic chains become long enough, they would tend to coil up in solution with the formation of molecular oil droplets. With simple molecules such as monofunctional straight-chain aliphatic compounds, clear-cut evidence seems to be lacking for such "balling-up" of chains. In fact, it ap-

<sup>(134)</sup> W. Draber, K. Blichel, K. Dickore, A. Trebst, and E. Pistorius, Progr. Photosyn. Res., 3, 1789 (1969).

<sup>(135)</sup> R. Zucal, J. Dean, and T. Handley, Anal. Chem., 35, 988 (1963).(136) A. Beckett and D. Dwuma-Badu, J. Pharm. Pharmacol., 21, 1628 (1969).

<sup>(137)</sup> P. Portoghese, A. Mikhail, and H. Kupferberg, J. Med. Chem., 11, 219 (1968).

pears that it will be quite difficult to disentangle this phenomenon from that of premicellular interactions.

If "balling-up" of an aliphatic chain occurred, one would expect the number of water molecules held in the flickering cluster around such a ball to be much less than the number held around the extended chain. This would mean a lower desolvation energy on phase transfer and, hence, a lesser increment in partition coefficient—possibly an abrupt discontinuity in  $\Delta \log P$  as one ascends a homologous series.

A clear example of such changes in partition coefficient as one ascends a homologous series is lacking. In the RCOOH series, normal behavior occurs up to decanoic acid.

av 
$$\pi/CH_2 = \frac{1}{8}(\log P_{C_0H_{19}COOH} - \log P_{CH_3COOH}) = 0.53$$

However,  $\Delta\pi$  between decanoic and dodecanoic acid is much smaller than the 1.0 unit expected in terms of simple additivity. The log P values for dodecanoic acid were determined using <sup>14</sup>C-labeled material. Great difficulty was experienced in obtaining reproducible results, and considerable uncertainty surrounds the value of 4.20 for dodecanoic acid. Whether this unexpectedly low value is due to a folding up of the aliphatic chain or a premicellular tail-to-tail dimerization remains an open question. Other solvent systems also produce a constant increment in  $\log P$  per  $-\text{CH}_2$ -group for fatty acid homologs. <sup>138</sup> This increment is about 0.6 in the heptane-water system for valeric through myristic acids. <sup>139</sup>

The alcohol homologous series also shows the expected increase in  $\log P$  with the addition of each  $CH_2$  unit. In this series

av 
$$\pi/CH_2 = \frac{1}{11}(\log P_{\text{dodecanol}} - \log P_{\text{methanol}}) = 0.52$$

there was some difficulty in obtaining constant  $\log P$  values over a wide concentration range for alcohols of greater chain length than  $C_{12}$ .

In summary, it would seem that "molecular oil droplet" formation does not occur with simple aliphatic compounds before  $C_{14}$ . If folding does not occur up to  $C_{14}$ , it would imply that there is an inherent stability in the aqueous phase of the aliphatic chain caused, perhaps, a by a restriction of rotation around each C-C bond as Aranow and Witten proposed.<sup>79</sup>

The situation is of course much different when more than one reactive center is present per molecule. It appears that folded conformations of many organic compounds in aqueous solution can be detected through partitioning studies. This is well illustrated by a study of derivatives of the type  $C_6H_5$ CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>X. When X = H, log P was found to be 3.68 which is quite close to the calculated value: log  $P_{bentene} + 3\pi_{CH_2} = 2.13 + 3(0.50) = 3.63$ . Other mixed aliphatic-aromatic compounds also give good agreement between calculated and observed values. However, in comparing  $\pi$  values

between RX and C<sub>6</sub>H<sub>5</sub>(CH<sub>2</sub>)<sub>8</sub>X, a constant discrepancy was observed as shown in Table XIV. The phenylpropyl functions

Table XIV Effect upon  $\pi$  of Folding of Alkyl Chains

Function	$\pi_1^a$	$\pi_2{}^b$	$\pi_1 - \pi_2$
OH	-1.80	-1.16	0.64
F	-0.73	-0.17	0.56
Cl	-0.13	0.39	0.52
Br	0.04	0.60	0.56
I	0.22	1.00	0.78
COOH	-1.26	-0.67	0.59
COOCH <sub>3</sub>	-0.91	-0.27	0.64
COCH₃	-1.26	-0.71	0.55
$NH_2$	-1.85	-1.19	0.66
CN	-1.47	-0.84	0.63
OCH <sub>3</sub>	-0.98	-0.47	0.51
CONH₂	-2.28	-1.71	0.57
			$Av = 0.60 \pm 0.05$

<sup>a</sup> Log  $P_{\text{CeH}_3(\text{CH}_2)\text{aX}}$  — log  $P_{\text{CeH}_6(\text{CH}_2)\text{aH}}$ . <sup>b</sup> Log  $P_{\text{RX}}$  — log  $P_{\text{R}}$ . R is a normal alkyl group of four carbon atoms or less.

turn out to have a greater affinity for the aqueous phase than one would expect from the corresponding aliphatic functions. Most surprising was the fact that  $\Delta \pi$  for the two systems was essentially constant regardless of the kind of function compared. It was suggested that this greater than expected aqueous solubility of phenylpropyl derivatives is due to folding of the side chain onto the phenyl ring. Such folding could be caused by the interaction of the dipole of the side chain with the  $\pi$ electrons of the ring. It would also be promoted by intramolecular hydrophobic bonding. However, the dipolar interaction would appear to be critical in overcoming the small forces which tend to keep the chain extended since propylbenzene, lacking such a dipole, has the expected log P value. This compact form of the phenylpropyl derivative means a smaller apolar surface for solvation and, hence, a lower entropy change in the desolvation process of partitioning. Since the size or kind of polar function has little to do with  $\Delta \pi$ , it seems likely that this function projects away from the ring side-chain complex.

Nmr evidence has been gathered<sup>140</sup> to show that similar folding occurs in compounds having the following structure.

It has also been suggested  $^{141}$  that such folding results in a lower than expected  $\log P$  for vitamin K. Folding is included as one of the possible group interaction parameters for a  $\pi$ -additivity scheme developed for the cyclohexane-water system.  $^{141}$ 

<sup>(138)</sup> A. Beckett and A. Moffat, J. Pharm. Pharmacol., 21, 144s (1969).

<sup>(139)</sup> D. Goodman, J. Amer. Chem. Soc., 80, 3887 (1958).

<sup>(140)</sup> B. Baker, M. Kawazu, D. Santi, and T. Schwan, J. Med. Chem., 10, 304 (1967).

<sup>10, 304 (1907).</sup> (141) D. Currie, C. Lough, R. Silver, and H. Holmes, Can. J. Chem., 44, 1035 (1966).

Certainly folding must be considered whenever a calculated log P must be used. The following two examples indicate how the problem can be treated in a straightforward manner.

diphenhydramine

Log P for diphenhydramine = 4.26 + 0.30 - 0.73 + 0.50 - 0.95 = 3.38, which would be adequate for most purposes, considering that the observed log P is 3.27. In the above example, 4.26 is  $2(\log P_{\text{CoHs}})$ . The value of 0.30 is for a CH<sub>2</sub> on which branching occurs. The value of (-0.73) for the OCH<sub>2</sub> moiety is obtained by subtracting 1.50 from 0.77, the value for  $\log P_{\text{EtOFt}}$ . For the  $-N(\text{CH}_3)_2$  unit we have used the value of -0.95 obtained for the solute,  $C_6H_5(\text{CH}_2)_3N(\text{CH}_3)_2$ . It is assumed that folding of diphenylhydramine occurs in aqueous solution, just as it did in the amine model system used in the calculations.

chlorpromazine

As another example  $\log P$  for chlorpromazine can be calculated as 4.15 + 0.70 + 0.60 = 5.45, which is in satisfactory agreement with the observed  $\log P = 5.35$ .

The value of 4.15 is  $\log P$  for phenothiazine. To this is added  $\pi_{\text{Cl}}$  of 0.70 and 0.60 for  $\pi_{(\text{CH}_2)_3\text{N}(\text{CH}_3)_2}$ . For the side chain,  $\pi$  was calculated from a model in which the opportunity for folding was the same as for chlorpromazine.

$$\pi_{(CH_2)_3N(CH_3)_2} = \log P_{C_6H_5(CH_2)_3N(CH_3)_2} -$$

$$\log P_{\rm C_6H_6} = 2.73 - 2.13 = 0.60$$

The oleyl alcohol-water partition coefficients of a series of phenoxyacetamide derivatives  $^{142}$  appear to provide further examples of folding over a benzene ring. In this case, the deviations from additivity in  $\pi$  values appear to be maximized when folding over the ring brings together hydrophobic portions of two para ring substituents.

The basic structure investigated can be depicted as

$$CH_2$$
— $CHCH_2$ 
 $OCH_2$ 
 $OCH_2$ 
 $R_2$ 

When  $R_1 = R_2 = \text{methyl}$ ,  $\log P = 1.53$ ; ethyl, 2.51; *n*-butyl, 1.80.

Folding of the phenoxyacetamide side chain over the benzene ring might be expected to show a constant  $\Delta \pi$  as was indicated in the examples in Table XIV. But after the expected increase in  $\log P$  in ascending the series from dimethyl to diethyl, a sudden *decrease* in lipophilic character is noted with the substituent chains of greater length. This observation

can be explained if it is postulated that folding will occur in all cases, but if the alkyl chains,  $R_1$  and  $R_2$ , are sufficiently long, they will be placed in such close proximity to the p-allyl group that cancellation of some hydrophobic character due to overlapping occurs.

Evidence that hydrophobic overlap can, indeed, lower the partition coefficient can be seen in molecules that are constrained to take an overlapped position. An example would be paracyclophane, whose  $\log P$  would be expected to be close to twice that of xylene, if the entire hydrophobic area were exposed.

paracyclophane

The observed value as shown in Table XVII is even lower than that of xylene itself, and thus it appears that only one-half the potential hydrophobic area is "exposed."

Of course, we must assume that in all these determinations of P values care was taken to work below cmc. It is conceivable that if a constant solute concentration were employed throughout a homologous series, the cmc would be exceeded with the higher members, giving falsely low log P values for them. While part of the effect noted in the phenoxyacetamide series could have arisen from this cause, it is highly unlikely that all of it can be explained in this fashion, especially since the biological response of the series so closely follows the measured log P values.

Although an actual conformational change which brings a polar group on a side chain in close proximity with the  $\pi$ electron cloud on the ring seems the best way to explain these negative  $\Delta \pi$ 's (observed — calculated), nevertheless, there are some apparent weaknesses in this hypothesis. First of all, it seems entirely possible that the close approach of the polar group and the ring, which causes the hydrophobic chain to fold on itself, might eliminate a corresponding amount of polar bonding with water, and the loss in hydrophilic bonding might cancel the loss in hydrophobic bonding. Furthermore, the folding must occur in the aqueous phase to cause the unexpectedly low log P, but it is difficult to imagine any induced polar force or charge-transfer condition which would be effective in a medium as polar as water. Finally, once the initial  $\pi$  lowering is encountered in several homologous series, no additional effect is seen as the chain length is increased, even though a larger hydrophobic area is presumed to be coming into close contact. This is very apparent in a series of 3-substituted 2-hydroxynaphthoquinones<sup>143</sup> where the same  $-\Delta\pi$  is noted whether the polar group and ring are separated by three methylene units or nine. Of course, in a chain longer than three carbon atoms, the entropy gained through hydrophobic overlap might be exactly cancelled by the energy needed to overlap the hydrogen atoms as each C-C bond is rotated in the manner needed for folding the chain.

It is to be expected that solutes which can readily form intramolecular hydrogen bonds will adopt this favored con-

<sup>(143)</sup> L. Fieser, M. Ettlinger, and G. Fawaz, J. Amer. Chem. Soc., 70, 3228 (1948).

figuration during partitioning and that  $\pi$  additivity will certainly be affected. Salicylic acid provides a typical example.

The  $\Delta \pi$  for a six-membered H-bonded ring is positive, as expected, because intramolecular H-bonding would reduce the affinity for the aqueous phase.

An even further reduction in hydrophobicity is possible when two ortho groups are involved:

$$H - O - OH$$

log 
$$P$$
 (calcd) = log  $P_{p\text{-hydroxybenzole acid}} + \pi_{\text{(OH para to CO2H)}}$   
= 1.58 + (-0.30) = 1.28  
log  $P$  (obsd) = 2.20  
 $\Delta \pi$  = +0.92

An intramolecular H bond of the type  $(-N-H\cdots O)$  in a six-membered ring is not expected to be as strong, and the  $\Delta\pi$  is found to be smaller.

$$\log P_{\text{anthranilio acid}} - \log P_{\text{p-aminobensoic acid}} = \Delta \pi$$

$$1.21 \qquad 0.68 = +0.53$$

#### VI. Uses of Partition Measurements

#### A. COUNTERCURRENT DISTRIBUTION

The relationship between the partition coefficient of a particular solute and the number of transfers necessary to properly characterize the distribution curve or to separate it from closely allied impurities is adequately covered in the literature. 22, 106, 144-147 It is a common practice to make a number of separate preliminary runs with both solute and suspected impurity in several solvent systems to attempt to optimize the two solvents used for the final distribution. Following the calculation procedures presented in section V and using the values listed in Table XVII as "parent" molecules, it may be possible to obtain reliable estimates of partition coefficients of a great number of solutes for many systems in which measurements have not yet been made. This procedure might considerably shorten the time required to find optimal extraction conditions. Furthermore, as more knowledge is gained on the effect of different solvents upon solute conformation (section V.D), better advantage could be taken in enhancing selectivity by providing an environment with precisely the right balance of conformational averages.<sup>23</sup> This knowledge might also prove helpful in predicting the possibility of metastable conformational forms which can cause an apparent shift in the partition ratio during fractionation.

#### B. MEASUREMENT OF EQUILIBRIA

The use of partitioning measurements to determine the equilibrium constants for the reactions

$$BH^{+} \stackrel{aq}{\longleftarrow} B + H^{+}$$

$$HA \stackrel{aq}{\longleftarrow} H^{+} + A^{-}$$

$$2HA \stackrel{org}{\longleftarrow} (HA)_{2}$$

$$HA + H_{2}O \stackrel{}{\longrightarrow} HA \cdot H_{2}O (+ (HA)_{2} \cdot H_{2}O + HA \cdot 2H_{2}O)$$

has been discussed in section II.B.

Many of the partition coefficient values reported in Table XVII for solutes which are metal ion complexing agents<sup>60,148,149</sup> have been measured in order to determine the equilibrium constant for the reaction of the type

$$M^{n+}_{(w)} + nH_2C_{(o)} \longrightarrow M(HC)_{n(o)} + nH^+_{(w)}$$

where M is the metal of valence n,  $H_2C$  is the neutral complexing agent (e.g., dithiazone), and (w) and (o) refer to the water and organic phases, respectively.

Another type of equilibrium studied by partitioning methods is that between an aldehyde and amine in forming a Schiff base. With salicylaldehyde 150,161 a study of the distribution as a function of pH must take into consideration a second equilibrium

RNH<sub>2</sub> + 
$$OH$$
CHO
 $CH = NR$ 
 $h$ 
 $CH = NR$ 

The shape of the curves depicting this relationship are seen in Figures 3 and 4. In each figure, section 1 of the curve represents the P value for free aldehyde, section 2 that of the Schiff base, and section 3 that of the phenoxide ion of the Schiff base. From separate evaluation of the dissociation constants of the components of the Schiff base, the log of the formation constant,  $\log K_f$ , is calculated to be 4.75 for the n-butyl-salicylidenimine and 4.57 for the methyl analog.

## C. RELATIONSHIP TO HLB AND EMULSION SYSTEMS

The HLB (hydrophile-lipophile balance) system, which was established on a purely empirical basis, <sup>162</sup> has been a very potent tool in the hands of emulsion technologists, but it has been felt for some time that even more rapid strides could be made in this field if this system could be directly related to the partition coefficient which is in turn based firmly on thermodynamics. Experimental difficulties have made such a task very difficult, <sup>153</sup> but Davies, who studied the kinetics of coalescence in emulsion systems, has proposed an equation <sup>154</sup> which relates the two in simple fashion

$$(HLB - 7) = 0.36 \ln 1/P$$

From this relationship it appears possible to give extrathermodynamic significance to each structural element in deter-

<sup>(144)</sup> L. Craig, C. Golumbic, H. Mighton, and E. Titus, J. Blol. Chem., 161, 321 (1945).

<sup>(145)</sup> R. Priore and R. Kirdani, Anal. Biochem., 24, 360 (1968).

<sup>(146)</sup> L. Craig, J. Biol. Chem., 155, 519 (1944).

<sup>(147)</sup> B. Williamson and L. Craig, ibid., 168, 687 (1947).

<sup>(148)</sup> S. Balt and E. Vandalen, Anal. Chim. Acta, 30, 434 (1964).

<sup>(149)</sup> B. Hok, Svensk Kem. Tidskr., 65, 182 (1953).

<sup>(150)</sup> R. Green and P. Alexander, Aust. J. Chem., 18, 329 (1965).

<sup>(151)</sup> R. Green and E. Measurier, ibid., 19, 229 (1966).

<sup>(152)</sup> W. Griffin, J. Soc. Cosmet. Chem., 1, 311 (1949).

<sup>(153)</sup> W. Griffin, ibid., 5, 249 (1954).

<sup>(154)</sup> J. T. Davies, Proc. Int. Congr. Surface Activ., 2nd, 1, 476 (1957).

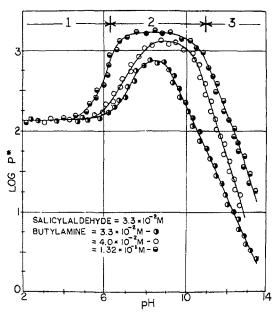


Figure 3. Formation of *n*-butylsalicylidenimine and partitioning between toluene and water.

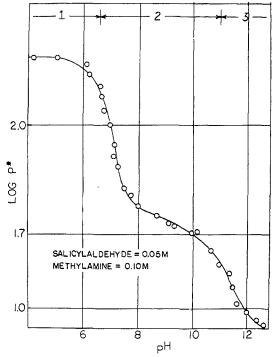


Figure 4. Formation of methylsalicylidenimine and partitioning between toluene and water.

mining the molecule's ability to function as a wetting agent, detergent, or defoamer. 61, 155

### (155) P. Becher, "Emulsions, Theory and Practice," Reinhold, New York, N. Y., 1966, p 233.

#### D. MEASUREMENT OF DISSOLUTION AND PARTITIONING RATE OF DRUGS

It is widely accepted that the dissolution rate of any drug given in solid form can have a marked influence upon the amount effectively absorbed. Since drug absorption is also affected by its effective partition coefficient, it is desirable to measure these properties simultaneously. This becomes more important in view of the observation that some surfactants are capable of increasing the rate of solution while simultaneously lowering the rate of partitioning. 156 With drugs that are poorly water soluble, the usual measurements of solubility rates require large volumes of water so that the drug concentration is far below the saturation level. Yet this often means that a separate extraction step must be carried out so that a sufficiently high concentration of drug is obtained for accurate analysis.

As a model system, hard, nondisintegrating tablets of salicylic acid of uniform surface areas were stirred under standard conditions in aqueous buffer (pH 2) with an upper octanol phase present. 156 The system can be described as follows.

$$A \xrightarrow{k_1} B \xrightarrow{k_2} C$$

A = weight of drug in tablet form, B = weight of drug in aqueous phase, C = weight of drug in octanol phase; then if  $W_a$  = weight of drug needed to saturate the aqueous phase, and using equal volumes of the two phases, the kinetic equations are

$$-dA/dt = k_1(W_s - B)$$

$$dB/dt = k_1(W_s - B) - k_2B$$

$$dC/dt = k_2B$$

In the early stages of dissolution,  $W_s \gg B$  and

$$-dA/dt = k_1 W_9 (55)$$

Furthermore, for lipophilic drugs, a steady-state concentration of B is quickly attained

$$dB/dt = 0 = k_1(W_8 - B) - k_2B$$
 (56)

and

$$dC/dt = k_2B = k_1(W_s - B) = -dA/dt$$
 (57)

The rate of appearance of drug in the lipid phase is easily measured and becomes equal to the dissolution rate in the aqueous phase.

If partitioning between aqueous and organic phases is to serve as a model system of how a biologically interesting solute passes through membranes in living tissue, then the rate at which equilibrium is attained might be as important as the equilibrium value itself. For solutes of similar structure, the activation energies for phase transfer are often approximately equal, and therefore the transfer rate constants are proportional to the equilibrium constants, P.92 However, an interesting exception was reported94 when a more rapid rate of partitioning from water to butanol was found for KCl than for NaCl, even though their P values are approximately equal. The measured difference in activation energy between these salts was 0.8 kcal/mol, which probably was due to

<sup>(156)</sup> P. J. Niebergall, M. Patil, and E. Sugita, J. Pharm. Sci., 56, 943 (1967).

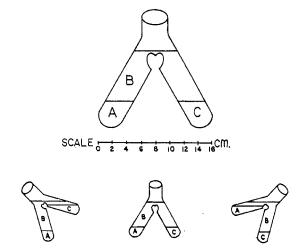


Figure 5. Effects of gentle rocking on the interfaces. Partitioning rate apparatus: Doluisio and Swintosky Y-tube.

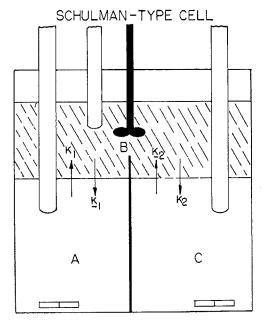


Figure 6. Magnetic stirrers used to study rate of transport across lipoid barrier; A, B, and C have the same meaning as in Figure 5.

differences in the loss of hydration as the ions entered the butanol phase.

Two basically different types of apparatus have been designed for partitioning rate studies. Doluisio and Swintosky 157 employed an inverted Y tube in which the oil phase in the neck was the only connecting "link" between the separate aqueous phases in the arms (see Figure 5). A gentle rocking motion was applied which gradually expanded and contracted the interfaces. This accelerated solute transfer but normally was insufficient to cause emulsion problems.

Earlier, Schulman<sup>3</sup> devised a two-compartment cell in which the separated aqueous phases were independently stirred from below while the "connecting" oil phase was stirred from above (see Figure 6). This apparatus has the advantage that the interface area remains constant, and there-

fore partition studies can be made on various solutes in the presence of trace amounts of surfactants (e.g., phospholipids) at the oil-water interface.

Either type of apparatus is capable of providing useful information on the rate of transfer from one aqueous environment through an organic phase (simulating a membrane) to a second aqueous environment. If the solute is placed initially in compartment A at pH 2 and compartment C is at pH 7.4, one has a model for transport across the gastric membrane.

The basic importance of partitioning rate studies cannot be seriously questioned, but the interpretation of the results is still subject to some ambiguity. For example, Augustine and Swarbrick 158 used a Schulman-type cell to study the effect of lipid polarity on the rate of transport of salicylic acid. As the polarity of the lipid phase was increased (by increasing the mole fraction of isoamyl alcohol in cyclohexane), there was an increase in rate at which salicylic acid left the first aqueous phase. This is the expected result and confirms the work of Khalil and Martin<sup>121</sup> who used a Y-tube apparatus. However, this same increase in polarity also increased  $k_2$ , the rate at which salicylic acid left the lipid phase for the second aqueous phase. This is unexpected and contrary to Khalil and Martin's findings. Augustine and Swarbrick then found that, while keeping the surface to volume ratio constant, they could reverse the order of  $k_2$  if they increased the stirring rate in the aqueous compartments. Then  $k_2$  did decrease with increasing lipid polarity, and the value for  $k_1$  was essentially unchanged.

Other discrepancies between measurements using the Y-tube and the Schulman cells have been noted, and it appears that some of the conditions assumed in the theoretical development that are not being met under all experimental conditions. For instance, it is assumed that the rate-determining step is the actual crossing of the interface boundary. This should be the case if the diffusion layer is of the order of magnitude of  $30 \mu$  in thickness. <sup>94</sup> Some care is required to adjust the stirring rate between that which is so slow that diffusion becomes rate determining and a stirring rate which is so great that nonlaminar flow breaks up the interface.

## E. LIQUID ION-EXCHANGE MEDIA AND ION-SELECTIVE ELECTRODES

The application of partition coefficients to the study of liquid ion-selective electrodes has been discussed in section II.D. It should be emphasized that the selectivity is dependent upon the nature of the organic *solvent* and not on the nature of the site species (alkyl acid or amine).

#### F. MEASUREMENT OF HYDROPHOBIC BONDING ABILITY. STRUCTURE– ACTIVITY PARAMETERS

In the introduction it was pointed out that in the past decade far more partition coefficients have been determined in connection with biological structure-activity relationship studies than for all other purposes combined. A large number of these studies have already been referred to,<sup>8,159</sup> and the usefulness of the octanol-water parameter to predict the binding of solutes to serum albumin and to purified enzymes has been convincingly established.

<sup>(157)</sup> J. Doluisio and J. Swintosky, J. Pharm. Sci., 53, 597 (1964).

<sup>(158)</sup> M. Augustine and J. Swarbrick, *ibid.*, 59, 314 (1970). (159) W. Scholtan, K. Schlossman, and H. Rosenkranz, *Arzneim.-Forsch.*, 18, 767 (1968).

Table XV	
Improved π Value	56

1	unction	Phenoxyacetic acids	Function	Phenylacetic acids	Function	Benzoic acids
	3-F	0.22	3-Me	0.54	4-Cl	0.78
	2-Cl	0.76	3-CF <sub>3</sub>	1.21	3-OCH <sub>2</sub> CO <sub>2</sub> H	-0.76
	2-Br	0.84	3-CN	-0.23		Phenols
	4-Br	1.19	3-OCH <sub>3</sub>	0.09	3-CN	0.22
	4-I	1.43	3-CO₂H	-0.27	4-NH2	-1.44
	2-Me	0.84	3-SO <sub>2</sub> CH <sub>3</sub>	-1.35		Anilines
	4-Me	0.60			4 <b>-</b> OH	-0.86
	2-Et	1.39				Nitrobenzenes
	2-NO.	-0.04			4-OCH <sub>2</sub> CO <sub>2</sub> H	-0.37

<sup>&</sup>lt;sup>a</sup> Differing by more than 0.05 from those listed in ref 10.

Evidence is rapidly accumulating which supports the postulate that simple, nonspecific bonding of solutes is capable not only of markedly affecting enzyme action through allosteric effects, but that it often produces biologically important modifications of membrane function by a similar mechanism. For example, it has been shown that the action of alkanols in the protection of red cells against hypotonic hemolysis is a linear function of their hydrophobic character as measured by partitioning experiments160 and, furthermore, that the concentration which affords hemolytic protection is very nearly the same as that which causes anesthesia. 161 The partition coefficient of alcohols between red cell ghosts and water has been measured, and it was found that in going from water to membrane, the free energy of transfer per methylene group was the same as that between water and octanol, namely,  $\cong$  -690 cal/mol. 161

The usefulness of a "bonding" parameter based on partition values from a single reference system can be greatly extended if not every value required in every structure-activity study need be measured. The principles of additivity for the octanol-water system were covered in section V, and examples of how values in Table XVII can be systematically applied in this fashion are given in the following section.

#### VII. The Use of Table XVII

The amount of partitioning data uncovered in the present study was great enough to warrant its storage, manipulation, and retrieval by computer. It will be noted that some of the log  $P_{\text{ootanol}}$  values listed in Table XVII differ slightly from those published earlier from this laboratory. Generally, the differences resulted from the use of improved analytical techniques and the values in Table XVII should be considered more reliable. The significant changes in  $\pi$  constants from those contained in ref 10 appear in Table XV.

In Table XVII the data have been sorted in their most useful form; namely, the solutes are sorted first by empirical formula, then alphabetically by name, and finally by solvent syssystem.<sup>162</sup>

The solute name appears in the right-hand column of Table XVII, and the reference from which the data were obtained appears in column 4. Column 6 lists the measured log P for the solute in the solvent system which appears in column 3. This value has been corrected for ionization, if any, and dimerization if measurements were reported over a sufficiently wide concentration range. The values are footnoted (column 5) as required. Column 7 lists the calculated log P for that solute in the octanol-water system. The regression equations used for this calculation appear in Table VIII together with the values for the standard deviation (s), the correlation coefficient (r), and the number of data points (n) which were available to establish the relationship. While the standard deviations indicate that some of these "regression values" are not sufficiently reliable for some purposes, nevertheless, they are useful in providing the only common scale of lipophilicity since only 20% of the values in the entire table are from a single system.

Space limitations and the absence of small letters and italics in computer printing precluded the use of the *Chemical Abstracts* system of nomenclature. For convenience in computer alphabetizing, the following rules were followed.

- Aliphatic chains—branching: I = iso, S = secondary, and T = tertiary, as usual. "Normal" isomers are assumed if not specified; i.e., BUTYRIC ACID = n-butanoic acid. N = nitrogen; e.g., N-methylaniline.
- 2. Aliphatic chains—location from primary functional group is designated by Greek letter:  $A = \alpha$ ,  $B = \beta$ ,  $G = \gamma$ ,  $D = \delta$ ,  $E = \epsilon$ , and  $W = \omega$ ; e.g., A-BROMOPROPIONIC ACID.
- 3. Position on benzene rings
  - (a) if only two functional groups or substituents: O = ortho, M = meta, and P = para, and the letter precedes the name; e.g., O-NITROPHENOL.
  - (b) if three or more substituents, numbering is from primary functional group; e.g., 3,4-DIMETHYL-PHENOL.
- In all other ring systems, a numbering system is used regardless of the number of substituents; e.g., 3-AMINO-PYRIDINE, 2-NAPHTHOL.
- For sorting and retrieval purposes, many trivial names were relegated to a secondary position; e.g., M-DIHY-DROXYBENZENE/RESORCINOL/; O-DIHYDROXYBENZENE/CAT-ECHOL/.

<sup>(160)</sup> H. Schneider, Biochim. Biophys. Acta, 163, 451 (1968).

<sup>(161)</sup> P. Seeman, S. Roth, and H. Schneider, ibid., 225, 171 (1971).

<sup>(162)</sup> As stored in the computer, each solute has also been given a unique Wiswesser line notation ("The Wiswesser Line-Formula Chemical Notation," E. G. Smith, Ed., McGraw-Hill, New York, N. Y., 1968). A comparison of  $\pi$  values by functional groups is greatly facilitated by referring to a printout sorted by a permuted alphabetic listing by WLN notation.

6. In the empirical formula, the subscript 1 is expressed and not assumed.

It is unlikely that, for the foreseeable future, there will be measured log P values for more than a small fraction of the interesting molecules which might be needed in structureactivity work. One of the aims of this present article is to make it possible to calculate, with a reasonable degree of confidence, the log P values in one common system (octanol-water) for a wide variety of molecules for which values have not, or perhaps cannot, be determined. The present section will explain how the calculation procedures given in section V can be combined with the regression equations of Table VIII and the data in Table XVII to yield calculated values of the highest possible confidence level.

It was evident in section V that there are often several "routes" by which one can calculate a Pootanol value, depending upon the choice of "parent" molecule and how substructures are pieced together. If the computed values by all the "routes" agree within ±0.1 log unit and also agree with any log Postanol for that solute appearing in Table XVII as calculated from another solvent system, then one can accept an average value with some confidence. If there are some widely divergent values, however, then one must choose the "route" which has the greatest likelihood of yielding an accurate value. In order to help make such a choice, we have assigned "uncertainty units" (uu) to each type of calculation step so that the route with the lowest sum is the one which can be used with greatest confidence. Although these "u" units have been assigned by considering the average deviation in log P values of solutes with the required structural differences, and even though they can be directly added to the standard deviations of the regression equation values (see Table VIII), they are not to be considered as standard deviations in the strict sense. They are listed in Table XVI. The standard deviations of the observed log Pootsnol values are used if given in the reference; otherwise, an arbitrary uu of 0.05 is taken.

The following examples illustrate this procedure [the superscripts mean that the values were obtained from (a) Table VIII, standard deviation; (b) Table XVI; (c) Table XVII].

#### (A) Menthol: no $\log P_{\text{oot}}$ measured

(1) Regression from oil-water system

log 
$$P_{\text{oot}} = (3.25^{\circ} \text{ and } 3.37^{\circ}) = \text{av } 3.31$$
  
uu = 0.28<sup>a</sup>

$$OH + \begin{bmatrix} OH & OH \\ 1.23^c & -1.46^c \end{bmatrix} = OH$$

$$\log P_{\text{out}} = 3.30^{\circ} + (-0.23) = 3.07$$

$$uu = 0.02^{b} + 0.04^{b} = 0.06$$
(3)  $C_{6}H_{5}OH + (CH_{3})_{2}CH - + -CH_{3}$ 

$$1.23 \quad (1.50 - 0.20) \quad 0.52$$

$$\log P_{\text{out}} = 1.23^{\circ} + 1.30^{b} + 0.50^{b} = 3.03$$

#### Table XVI "Uncertainty Units"

	CHOOLIG		••	
Calculation step or group	π per step or group	Uncer- tainty units (uu)		Comments and exceptions
1CH <sub>2</sub> -	0.50	0.02	.,	$\pi$ lower if between two very polar groups, e.g., malonic acid
			(b)	π lower if folding interaction possible (section V.D)
2. Branching				
(a) in C chain	-0.20	0.02	(a)	Sign of $\pi$ changes if steric blocking of polar group possible
(b) of functional				
group	-0.20	0.05		
(c) ring closure	-0.09	0.02		
<ol><li>Double bond</li></ol>	-0.30	0.03		
4. Folding	-0.60	0.05	(a)	See unusual case of phenoxyacetamides (section V.D)
5. Intramolecular				(00000000000000000000000000000000000000
H-bonding	0.65	0.10		
6. Equivalence of				
aliphatic OH and				
NH <sub>2</sub>	0.00	0.05		
7. Aliphatic groups				
(a) -COOH	-0.65	0.03		
(b) -OH	-1.16	0.03		
(c) -NH2	-1.16	0.03		
(d) -C=O	-1.21	0.03		
(e) -CN	-0.84	0.04		
(f) -O-	-0.98	0.05		
(g) -CONH <sub>2</sub>	-1.71	0.05		
(h) -F	-0.17	0.03		
(i) -Cl	0.39	0.04		
(j) <b>-B</b> r	0.60	0.04		
(k) –I	1.00	0.05		

For aromatic substituents, use  $\pi$  values and standard deviations (as uu) appearing in T. Fujita, et al., J. Am. Chem. Soc., 86, 5175 (1964).

$$uu = 0.02^b + 0.08^b + 0.02^b = 0.12$$

Route 2 should be chosen for several reasons. It has the lowest uu value. The electronic effect on  $\pi$  of the difference between an aliphatic and aromatic OH group is precisely allowed for. Adding the isopropyl group adjacent to the OH in route 3 may involve a steric blocking of its hydrophilic character.

#### (B) n-Propylamine: no log Poot measured

(1) Equivalence of OH and NH2

$$\log P_{\rm out}$$
 (propanol) =  $0.34^{\rm c}$ 

$$uu = 0.07^{b}$$

(2) (CH<sub>3</sub>CHNH<sub>2</sub>CH<sub>3</sub>) - (branch)

$$\log P_{\text{oct}} = -0.03^{\text{c}} - (-0.20)^{\text{b}} = 0.17$$

$$uu = 0.02^b + 0.05^b = 0.07$$

(3) n-Propylamine

 $log P_{oct}$  (regression from ether-water) = 0.37

$$uu = 0.27^{a}$$

(4) n-Butylamine - methyl

$$\log P_{\text{out}} = 0.81^{\text{c}} - 0.50^{\text{b}} = 0.31$$

$$uu = 0.02^{\text{b}} + 0.02^{\text{b}} = 0.04$$

Since route 4 has the lowest uu and is reinforced by (1) and (3), it is preferred over (2).

- (C) Lactic acid:  $\log P_{\text{out}} = -0.62^{\text{c}}$ 
  - (1) Hydroxyacetic acid + methyl + branch = CH<sub>3</sub>CHOHCO<sub>2</sub>H

$$\log P_{\text{out}} = -1.11^{\circ} + 0.50^{\circ} + (-0.20)^{\circ} = -0.81$$

$$uu = 0.05^{\circ} + 0.02^{\circ} + 0.05^{\circ} = 0.12$$

(2) Regression from ether-water

$$\log P_{\text{out}} \text{ (av of 5)} = -0.80$$

$$uu = 0.19^{a}$$

(3)  $(CH_3)_2C(OH)CO_2H$  - methyl - branch = lactic

$$\log P_{\text{oct}} = -0.36^{\text{c}} - 0.50^{\text{b}} - (-0.20)^{\text{b}} = -0.68$$

$$uu = 0.05^{\text{c}} + 0.02^{\text{b}} + 0.02^{\text{b}} = 0.69$$

The measured log  $P_{\text{oct}}$  agrees quite well with that arrived at by route 3. The values arrived at by routes 1 and 2 should not be totally disregarded, however, because the presence of an appreciable amount of polylactic acid impurity in the sample measured by Collander could be responsible for an observed value which was 0.1 to 0.2 unit too high.

(D) Acetonylacetone:  $\log P_{\text{out}}$  not measured

$$\log P$$
 uu

- (1) Regression from ether-water  $-0.19 0.19^a$
- (2) Log  $P_{\text{out}}$  (acetone)<sup>c</sup> × 2 -0.48 0.10
- (3) 2-Butanone + acetone methyl =

#### CH3COCH2CH2COCH3

$$\log P_{\text{oct}} = 0.29^{\text{c}} + (-0.24)^{\text{c}} - 0.50^{\text{b}} = -0.45$$
  
$$uu = 0.02^{\text{c}} + 0.05^{\text{c}} + 0.02^{\text{b}} = 0.09$$

The choice clearly favors the range -0.45 to -0.48.

(E) Levulinic acid: log Poet not measured

(1) 
$$CH_3COCH_3 + CH_3CO_2H = CH_3COCH_2CH_2CO_2H$$

$$\log P_{\text{oct}} = -0.24^{\text{c}} + (-0.17)^{\text{c}} = -0.41$$

$$uu = 0.05^{\text{c}} + 0.02^{\text{c}} = 0.07$$

(2) 2-Butanone + aliphatic -CO<sub>2</sub>H

$$\log P_{\text{oct}} = 0.29^{\text{c}} + (-0.65)^{\text{b}} = -0.36$$

$$uu = 0.02^{\text{c}} + 0.03^{\text{b}} = 0.05$$

log P uu

(3) Regression from ether-water -0.40 0.19<sup>a</sup> (av 3)

- (4) Regression from i-BuOH-water  $-0.39 0.14^{B}$
- (5) Regression from CHCl<sub>3</sub>-water 0.08 0.27<sup>a</sup> (av 2)

Clearly the value by route 5 is eliminated from consideration and a value in the range of -0.36 to -0.40 is preferred.

(1) 
$$\begin{bmatrix} N-CH \\ OH \end{bmatrix}$$
 -  $[OH]$  +  $[C_0H_3CH_2CO_2H]$  +  $[CHOH]$  +  $[branch]$ 

$$\log P_{\text{oct}} = -0.28^{\text{c}} - (-1.16)^{\text{b}} + 1.30^{\text{c}} + (-0.66)^{\text{c}} + -0.20^{\text{b}} = 1.32$$

$$uu = 0.27^{\text{a}} + 0.05^{\text{b}} + 0.02^{\text{c}} + 0.02^{\text{c}} + 0.02^{\text{c}} = 0.38$$

(2) As (1) but log P tropine regr. from i-BuOH-water

$$\log P_{i\text{-BuOH}} = 0.21^{c} - (-1.16)^{b} + 1.30^{c} + (-0.66)^{c} + (-0.20)^{b} = 1.81$$

$$uu = 0.15^{a} + 0.05^{b} + 0.02^{c} + 0.02^{c} + 0.02^{c} = 0.26$$

The measured log  $P_{\text{out}}$  for atropine is 1.81 which is in agreement with route 2. The uncertainty of route 1 is not that much worse than (2), but the measured value for tropine in etherwater appears very doubtful.

(G) p-N-Methylaminobenzoic acid, N,N-dimethylaminoethyl ester

CH<sub>3</sub>NH — COOCH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>

(1) CH<sub>3</sub>NH- + (C<sub>6</sub>H<sub>5</sub>COOCH<sub>2</sub>-) + (-CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>)

$$\log P = (0.50^{b} - 1.23^{*}) + 2.12^{c} + 0.27^{c} = (1.66)$$
 $uu = 0.01^{b} + 0.02^{b} + 0.02^{b} + 0.05^{d} = (0.10)$ 
 $\log P_{(corr)}^{168} = 2.03$ 
 $uu = 0.18$ 

(2) Regression from oil-water

$$\log P_{\rm out} = 2.01^{\rm c}$$

$$uu = 0.29^{\rm a}$$

(3)  $\text{Log } P_{\text{oct}} \text{ (measured)} = 1.95^{\text{c}}$ 

In these first examples, the amount of interaction between the component parts used in the calculations was either small or it could be taken into consideration (as in G). In the following example this is not the case, and it can be seen that it is possible to use the proposed method of calculation to support an erroneous measured value.

<sup>(163)</sup>  $\pi_{NH_2} = -1.23$  uses benzene as the "parent." Correcting for electronic effects (ref 10) using  $\sigma$  (-COCH<sub>3</sub>) = 0.39, we correct  $\pi$  by 0.37 and add to the uu by 0.08.

(H) Antipyrene 
$$\begin{array}{c} O \\ C \\ CH_3 \\ CH_3 \\ \end{array}$$

(1) Log  $P_{\text{oct}}$  regression from ether-water  $\begin{array}{c} \log P \\ 0.27^a \\ \end{array}$ 

(2) Log  $P_{\text{oct}}$  regression from  $0.53^c$   $0.27^a$ 

(3) Log  $P_{\text{oct}}$  regression from oil-water  $\begin{array}{c} 0.12^c \\ 0.28^a \\ 0.15^c \\ 0.28^a \\ \end{array}$ 

(4) Log  $P_{\text{oct}}$  regression from  $0.21^c$   $0.21^c$   $0.15^a$ 

The value of 0.21 should be favored because it has the lowest uu value, but one could attempt to verify it by calculation.

$$Log P = 2.13^{\circ} + (-0.21)^{\circ} + (-0.30)^{b} + (0.27^{\circ} - 1.0)^{b} + (-0.20)^{b} + (-0.18)^{b} = 0.53$$

$$uu = 0.02^{\circ} + 0.02^{\circ} + 0.03^{b} + 0.05^{\circ} + 0.04^{b} + 0.02^{b} + 0.04^{b} = 0.22$$

Without any allowance for an interaction between the amide and amine nitrogen atoms, route 5 would support route 2. With such a variety of values to choose from and no clear preference indicated by uu values, the only safe course is to measure the P value directly. In this case  $\log P_{\rm out}$  turned out to be 0.23 and the route 4 was vindicated.

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#### VIII. Glossary of Terms

A<sup>-</sup> anionic form of acidic solute
 α degree of ionization
 B neutral form of basic solute
 BH<sup>+</sup> protonated form of basic solute
 C molar concentration

critical micelle concentration (molar) cmc steric parameter as defined by Taft  $E_{\mathfrak{o}}$  $\langle \epsilon \rangle_j$ average energy level of jth group G free energy Henthalpy HA neutral form of acidic solute H<sub>2</sub>C dihydric complexing agent hydrophile-lipophile balance HLB dissociation constant of single molecules into ions  $K_{\Lambda}$ in aqueous phase association constant of single into double molecules in  $K_{assoc}$ lipoid phase; equals  $1/K_D$ dissociation constant of double into single molecules  $K_{\mathrm{D}}$ in lipoid phase association constant between hydrogen bond donor  $K_{\mathtt{HB}}$ and acceptor association constant for formation of complex or imine  $K_{\rm f}$ k Boltzman constant milliliters of lipoid extracting phase  $\boldsymbol{L}$  $M^{n+}$ metal ion carrying charge of n+ (in counter-current distribution) position of peak N N (in partition calculation) concentration of un-ionized solute in water at first concentration level (in mol/l.) (in counter-current distribution) total number of tubes n (in partition calculation) concentration of un-ionized n solute at second concentration level (in mol/l.) (in regression equations) number of data points treated n organic (or oil) phase (o) partition coefficient; nonpolar/polar phase; refers to P concentration of neutral solute unless specified (only exception is in eq 19 and 20 where P refers to pressure) P\* apparent partition coefficient (total solute measured, regardless of form) P'thermodynamic partition coefficient = ratio of mole fractions in nonpolar/polar phases. negative logarithm of acid ionization constant  $pK_a$ hydrophobic substituent constant;  $\pi_X = \log P_X$  - $\pi$  $\log P_{\rm H}$ gas constant R (in regression equations) correlation coefficient r (in counter-current distribution) specific tube number standard deviation s S entropy electronic parameter as defined by Hammett σ (in counter-current distribution) fraction of total solute TTabsolute temperature chemical potential (per mole) μ V. molar volume of solvent ml of aqueous solution being extracted water phase (w) X mole fraction

particle partition function (quantum mechanics)

state function (quantum mechanics)

Z

Table XVII SORTED BY EMPIRICAL FORMULA, THEN NAME, THEN SOLVENT NUMBER, THEN REFERENCE. MEASURED "LOGP OCT" FOLLOWED BY "="; OTHERS CALC FROM SPECIFIED EQ IN TABLE VIII

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
1	GILS	164	22	0.60	0.94 B	AR1	ARGON
2	NITROBENZENE	92	46	-5.04		BR1K1 BR2	POTASSIUM BROMIDE BROMINE
3 4	CCL4 CS2	165		1.35		8R2	BROMINE
5	BROMOFORM	166		1.80		BRZ	BROMINE
6 7	N-BUTANOL N-BUTANOL	91 91	46 46	-1.82 -1.74	-3.03 -2.92	CLICSI CLIKI	CESIUM CHLORIDE POTASSIUM CHLORIDE
8	N-BUTANOL	94	46	-1.74	-2.94	CLIKI	POTASSIUM CHLORIDE
9	NITROBENZENE	92		-5.36		CL1K1	POTASSIUM CHLORIDE
10 11	N-BUTANOL N-BUTANOL	91 91	46 46	-1.55 -1.76	-2.66 -2.96	CLILII CLINAI	LITHIUM CHLORIDE SODIUM CHLORIDE
12	N-BUTANOL	94	46	-1.74	-2.94	CLINAL	SODIUM CHLORIDE
13	SEC-BUTANOL	94	46	-1.19	-3.03	CLINAI	SODIUM CHLORIDE RUBIDIUM CHLORIDE
14 15	N-BUTANOL CCL4	91 167	46 51	-1.74 1.29	-2.92	CL1R81 CL2	CHLORINE
16	OILS	168	46	-0.46	0.06 B	CL2HG1	MERCURIC CHLORIDE
17	DIETHYL ETHER	2		-1.74 -3.15	-1.42 A -1.64 A	0201 0201	DEUTERIUM OXIDE DEUTERIUM OXIDE
18 19	OILS OILS	164		0.23	0.66 B	HE1	HELIUM
20	CCL4	169		0.54		IIBR1	10DINE MONOBROWIDE
21 22	CCL4 NITROBENZENE	169 92	46	-0.70 -3.74		IICLI IIKI	IDDINE MONOCHLORIDE POTASSIUM IDDIDE
23	NITROBENZENE	92		-5.00		IILII	LITHIUM IGDIDE
24 25	NITROBENZENE	92 92		-4.59 -3.60		IINAL IIRBL	SODIUM IODIDE RUBIDIUM IODIDE
26	NITROBENZENE CHCL3	165		2.12		12	IODINE
27	BENZENE	170		2.59		12	IDDINE
28 29	NITROBENZENE PRIM. PENTANOLS	170 47		2.29		12 12	IODINE IODINE
30	CCL4	166		1.93		12	IODINE
31 32	CS2 DODECANE	166 165		2.77 1.87		I 2 I 2	IODINE IODINE
33	HEXADECANE	165		1.59		12	IDDINE
34	BROMOFORM	166		2.62		12	IODINE KRYPTON
35 36	OILS	164		0.88	1.16 B 0.92 B	KR1 N2	NITROGEN
37	CCL4	171		1.15	*****	040\$1	OSMIUM TETROXIDE
38	CCL4	172	22	1.09	2.05 B	040\$1 RD1	OSMIUM TETROXIDE RADON
39 40	OILS	164 164	22	1.16	1.37 B	XE1	XENON
41	OILS	173		-1.04	0.25 A	HICL1	HYDROGEN CHLORIDE
42 43	DIETHYL ETHER CHCL3	174	12	-0.64 -2.92	-0.44 A	H1F1 H1F1	HYDROFLUORIC ACID HYDROFLUORIC ACID
44	DIETHYL ETHER	175		0.84	0.86 A	H1N3	HYDROGEN AZIDE
45	DIETHYL ETHER CHCL3	174		0.86 +0.16	0.88 A 1.07 A	H1N3 H1N3	HYDROGEN AZIDE Hydrogen azide
46 47	SEC-BUTANOL	84		-0.44	-1.15	H201	WATER
48	DIETHYL ETHER	176		-1.18	-0.92 A	H202	HYDROGEN PEROXIDE
49 50	DIETHYL ETHER DIETHYL ETHER	177 178		-1.36 -0.94	-1.08 A -0.70	H2O2 H2O2	HYDROGEN PEROXIDE HYDROGEN PEROXIDE
51	DIETHYL ETHER	174		-1.19	-0.92 A	H2O2	HYDROGEN PEROXIDE
52	CHCL3	179 174	26 12	-2.78 -3.34	-1.29 A -1.82 A	H2O2 H2O2	HYDROGEN PEROXIDE HYDROGEN PEROXIDE
53 54	BENZENE	179		-2.30	-0.89 A	H202	HYDROGEN PEROXIDE
55	1-BUTANOL	179	26	-C-48	-1.19	H2O2	HYDROGEN PEROXIDE HYDROGEN PEROXIDE
56 57	I-BUTANOL NITROBENZENE	178	26	-0.41 -2.30	-1.09 -1.03	H202 H202	HYDROGEN PEROXIDE
58	PRIM. PENTANOLS	177		-0.85	-1.38	H2O2	HYDROGEN PEROXIDE
59 60	PRIM. PENTANOLS ETHYL ACETATE	180		-0.85 -0.60	-1.37 -0.70	H202 H202	HYDROGEN PEROXIDE Hydrogen Peroxide
61	I-PENT. ACETATE	178		-1.11	-1.33	H202	HYDROGEN PEROXIDE
62	N-BUTANOL	181		-1.00		H2O4P1 H2O4P1	ORTHOPHOSPHATE ANION ORTHOPHOSPHATE ANION
63 64	HEXANOL N-BUTANOL	181	18 10	-0.52 0.30		H207P2	PYROPHOSPHATE ANION
65	HEXANOL	181	18	C.73		H207P2	PYROPHOSPHATE ANION
66 67	DIETHYL ETHER CHCL3	174 174		0.95 0.89	0.96 A 1.44 N	H2S1 H2S1	HYDROGEN SULFIDE HYDROGEN SULFIDE
68	DIETHYL ETHER	174		-1.96	-0.90 B	H3N1	AMMONIA
	CHCL3	174	10	-1.35	-1.37 B	H3N1 H3N1	AMMONIA AMMONIA
- 1	SEC-BUTANOL TOLUENE	68	17	-1.40	-2.04 -0.35 B	H3N1	AMMONIA
72	PRIM. PENTANOLS CCL4 DIETHYL ETHER CHCL3 DIETHYL ETHER CHCL3	182		-0.85	-0.35 B -1.49 -1.56 B	H3N1	AMMONIA AMMONIA
73	CCL4 DIETHYL ETHER	174		-2.35	-1.56 B -1.87 A	H3N101	AM MUNI A HY DROXYL AMINE
75	CHCL3	174		-2.58	-1.13 A	H3N1O1	HYDROXYLAMINE
76	DIETHYL ETHER	174		-2.34	-1.23 8 -1.37 B	H4N2	HY DRAZINE HY DRAZINE
78	CHCL3 BENZENE I-BUTANOL PRIM. PENTANOLS OILS	183		-1.65	-0.60 B	H4N2	HYDRAZINE
79	I-BUTANOL	184		-0.66		H5N101	AMMONIUM HYDROXIDE AMMONIUM HYDROXIDE
80	OILS	173		0.20	0.64 B	H5N101 C1CL1N1 C1CL3N102 C1CL4 C1I1N1	CYANDGEN CHLORIDE
				2.42	2.44 B	CICL3N102	CHLOROPICRIN
				2.66 -0.75	2.64 B	CICL4 CIIINI	CARBON TETRACHLORIDE
85	OILS	185		2 08	2.16 8	C152	CARBON DISULFIDE
	OILS	82		1.70	1.84 8	CISS	CARBON DISULFIDE
88	OCTANOL OILS	173		1.86	1.98 B	C152 C1HICL3 C1HICL3 C1HIN1 CHIN1	CHLOROFORM
89	DIETHYL ETHER	187		0.38	0.45 A	CIHINI	HYDROCYANIC ACID
90 91	CHCL3	174		-0.67	U.35 A	CIHINI	HYDROCYANIC ACID
92	OILS DIETHYL ETHER DIETHYL ETHER CHCL3 BENZENE BENZENE	174		-0.66	0.62 A	CIHINI	CARBON DISULFIDE CHLOROFORM CHLOROFORM HYDROCYANIC ACID
93 64	BENZENE BENZENF	187	12	-0.35 -0.57	1.07 A 0.81 A	CIMINI	HYDROCYANIC ACID
95	CCL4	187		-1430		CIHINI	HYDROCYANIC ACID
96 c7	ETHYL BROMIDE	187		-0.45 -0.45		CINIA	HYDROGYANIC ACID Hydrogyanic acid
98	CCL4 ETHYL BROMIDE BROMOETHANE DIETHYL ETHER OILS	3		-0.96	-0.72 A -0.91 A	C1H2N2	CYANAMIDE
99	DILS PRIM. PENTANOLS	1 2 0		-2.35	-0.91 A -0.68	C1H2N2 C1H2N2	CY ANAM I DE CY ANAM I DE
100	INADA FERTANULS	.09		J. 3V		er dittle title	

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA  C1H2N2 C1H2N2 C1H201 C1H202 C1H201 C1H401 C1H501 C1H501 C1H501 C1H501 C1H501 C1H501 C1H501 C1H501 C1H501	NAME
101	ETHYL ACETATE	189	12	-0.19 -0.71	-0.26 -0.28	C1H2N2 C1H2N2	CYANAMIDE CYANAMIDE
103	ME-I-BUT.KETONE	189		-0.23	-0.27	C1H2N2	CYANANIDE
105	DCTANOL	188	12	-0.54	-0.54 =	C1H201 C1H202	FORMIC ACID
106	DIETHYL ETHER	190		-0.52	-0.34 A	C1H2O2	FORMIC ACID
108	DIETHYL ETHER	192		-0.45	-0.28 A	C1H2O2	FORMIC ACID
109	DIETHYL ETHER DIETHYL ETHER	46 36	•	-0.40	-0.23 A	C1H2O2 C1H2O2	FORMIC ACID FORMIC ACID
111	CHCL3	45	12	-2.50	-1.03 A	C1H2O2	FORMIC ACID
112	CHCL3	36 193		-2.12	-0.44 A	C1H2U2 C1H2U2	FORMIC ACID
114	BENZENE	45		-2.95	-1.55 A	C1H2O2	FORMIC ACID
116	BENZENE	193		-2.57	-1.15 Å	C1H2O2	FORMIC ACID
117	N-BUTANOL SEC-BUTANOL	190		0.03	-0.62 -0.47	C1H2U2 C1H2U2	FORMIC ACID
119	XYLENE	193		-2.38	-0.97 A	C1H2O2	FORMIC ACID
121	TOLUENE	41		-2.66	-0.73 A	C1H2O2	FORMIC ACID
122	NITROBENZENE PRIM. PENTANOLS	48 190		-1.67 -0.26	-0.51 -0.73	C1H2O2 C1H2O2	FORMIC ACID
124	ETHYL ACETATE	194	24	-0.23	-0.30	C1H2D2	FORMIC ACID
126	DI-1-PR. ETHER	190	20	-0.84	-0.42	C1H2O2	FORHIC ACID
127	2-BUTANONE ME-I-BUT-KETONE	190 195		-0.34	0.39 -0.37	C1H2O2 C1H2O2	FORMIC ACID
129	ME-I-BUT-KETONE	196		-0.38	-0.40	C1H2O2	FORMIC ACID
131	O-NITROTOLUENE	48		-1.81	-0.35	C1H2O2	FORMIC ACID
132	S-PENTANOLS S-PENTANOLS	190 195	12	-0.22	-0.22 -0.56	C1H2O2 C1H2O2	FORMIC ACID FORMIC ACID
134	CS2	193		-3.23	*	C1H2O2	FORMIC ACID
135	OCTANOL	197		1.69	1.69 =	C1H3I1	METHYL IODIDE
137	DIETHYL ETHER	3		1.92	1.80 A	C1H3I1 C1H3N1O1	METHYL IODIDE FORMAMIDE
139	OILS	2		-3.12	-1.61 A	C1H3N101	FORMANIDE
140	OCTANOL OCTANOL	186		0.08	0.08 =	C1H3N102 C1H3N102	NI TROMETHANE
142	CYCLOHEXANE	141		-0.93	0.17 8	C1H3N1O2 C1H3N1O2	NITROMETHANE NITROMETHANE
144	DIETHYL ETHER	3		-3.33	-2.79 A	C1H4N2OL	UREA
145	DIETHYL ETHER	198		-3.30	-2.76 A	C1H4N2O1	UREA
147	CHCL3	112		-3.85 -3.82	~2.97 N -2.26 A	C1H4N2O1 C1H4N2O1	UR EA UR EA
149	OCTANOL	9		-1.14	-1.14 =	CIH4N2S1	THIOUREA
150	DIETHYL ETHER	112		-2.10	-1.70 A	C1H4N251	THIOUREA
152	DIETHYL ETHER	198	12	-2.14	-0.95 A	C1H4N2S1	THIOUREA THIOUREA
154	OILS	2	••	-2.92	-1.43 A	C1H4N2S1	THIOUREA
156	OCTANOL	186		-0.82	-0.82 =	C1H401 C1H401	METHANOL
157	DIETHYL ETHER	174		-0.85	-0.63 A	C1H401 C1H401	METHANOL METHANOL
159	CYCLOHEXANE	199		-1.84	-1.00 %	C1H401	METHANOL
160	CHCL 3	174		-1.36 -1.96	-0.66 N	C1H401 C1H401	METHANOL METHANOL
162	OILS	101		-2.01 -2.11	-0.63 A	C1H401 C1H401	METHANOL METHANOL
164	OILS	201		-2.02	-0.65 Å	C1H401	METHANOL
165	NITROBENZENE OCTANOL	202		-1.60 -0.57	-0.46 -0.57 =	CIH4UI CIH5NI	METHYLAMINE
167	DIETHYL ETPER	203	12	-1.64	-0.60 B	CIH5NI CIH5NI	METHYLAMINE METHYLAMINE
169	CHCL3	68		-0.90	-1.00 B	C1H5N1	METHYLAMINE
170 171	CHCL3 BENZENE	204 205		-1.09 -1.34	-1.15 B 0.37 B	C1H5N1 C1H5N1	METHYLAMINE METHYLAMINE
172 173	I-EUTANOL XYLENE	184 46		0.00	-0.52 -0.43 8	C1H5N1 C1H5N1	METHYLAMINE METHYLAMINE
174	TOLUENE	205		-1.40	-0.35 8	C1H5NI	METHYL AMINE
175 176	PRIM. PENTANOLS OCTANOL	182 206		-0.45 2.44	-0.98 2.44 =	C1H5N1 C2H1BR2N3	METHYLAMINE 1,2,3-TRIAZOLE,4,5-DIBROMO
177 178	OCTANOL DIETHYL ETFER	206		2.24 1.57	2.24 = 1.49 A	C2H1BR2N3 C2H1CL3O2	1,2,4-TRIAZOLE,3,5-DIBROMO TRICHLORDACETIC ACID
179	DIETHYL ETHER	207		1.21	1.18 A	C2H1CL302	TRICHLOROACETIC ACID
180 181	DIETHYL ETHER DIETHYL ETHER	113 46		1.63 1.78	1.54 A 1.68 A	C2H1CL3O2 C2H1CL3O2	TRICHLOROACETIC ACID TRICHLOROACETIC ACID
182	CHCL 3 BENZENE	43 208		-0.69 -1.30	0.61 A 0.10 A	C2H1CL302 C2H1CL302	TRICHLOROACETIC ACID TRICHLOROACETIC ACID
184	TOLUENE	43		-0.98	0.72 A	C2H1CL302	TRICHLOROACETIC ACID TRICHLOROACETIC ACID
185 186	NITROBENZENE PRIM. PENTANOLS	43 43		0.04	0.91 1.96	C2H1CL3O2 C2H1CL3O2	TRICHLORDACETIC ACID
187 188	BROMOETHANE IODOMETHANE	43 41		-0.26 -1.06		C2H1CL302	TRICHLOROACETIC ACID TRICHLOROACETIC ACID
189	DIETHYL ETHER	192		1.24	1.20 A	C2H2CL2O2 C2H2CL2O2	DICHLOROACETIC ACID DICHLOROACETIC ACID
190 191	DIETHYL ETHER DIETHYL ETHER	113 46		1.46	1.39 A 1.27 A	C2H2CL2O2	DICHLOROACETIC ACID
192 193	CHCL3	113 209		-0.89 -0.30	0.41 A 0.94 A	C2H2CL2O2 C2H2CL2O2	DICHLORDACETIC ACID DICHLORDACETIC ACID
194	BENZENE	208 43		-1.40 -1.42	0.00 A 0.33 A		DICHLOROACETIC ACID DICHLOROACETIC ACID
196	TOLUENE NITROBENZENE	43		-0.10	0.79	C2H2CL2G2	DICHLORGACETIC ACID
197 198	CCL4 10DOMETHANE	43 41	12	-2.31 -1.15	-0.14 A	C2H2CL2O2 C2H2CL2O2	DICHLOROACETIC ACID
199 200	OCTANOL DIETHYL ETHER	56 113		1.04	1.04 = 1.06 A	C2H2CL3N101 C2H2CL3N101	TRICHLORGACETAMIDE TRICHLOROACETAMIDE

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP	EMPIRICAL FORMULA	NANE
122345678901123445678901233456789012322222222222222222222222222222222222	CHCL3 OCTANOL DIETHYL ETHER N-BUTANOL PRIM- PENTANOLS ETHYL ACETATE HEXANOL DIETHYL ETHER OTANOL DIETHYL ETHER OTANOL DIETHYL ETHER OTANOL DIETHYL ETHER	113 210 211 211 212 3 46 213 3 194 41 195 195 209 214 40 40 215 44 40 40 215 44 40 40 41 41 40 40 41 41 40 40 41 41 40 40 41 41 40 40 40 40 40 40 40 40 40 40 40 40 40	12 12	SOLV  0.31 0.12 -1.02 -1.02 -0.94 -0.92 -0.72 -0.91 -0.87 -0.76 -0.34 -0.48 -0.69 -0.44 0.41 0.64 -1.14 -0.72 -1.41 -1.55 -0.18 0.41 0.42 0.39 0.02 0.37 -1.67 -1.35 -1.92 -1.41 -1.45 -1.55 -1.60 -2.02 -1.47 -1.74 -1.75 -1.92 -1.10 -1.45 -1.92 -1.60 -2.02 -1.36 0.63 0.60 -2.02 -1.47 -1.76 -1.92 -1.10 -1.45 -1.55 -1.36 0.63 0.60 -2.02 -1.49 -1.25 -1.50 -1.36 0.83 -0.20 -1.75 -1.76 -0.17 -1.95 -1.10 -1.45 -1.55 -1.36 0.63 0.60 -2.56 -1.76 -0.27 -1.96 -0.17 -1.96 -0.17 -1.96 -0.17 -1.96 -0.27 -1.96 -0.17 -1.96 -0.27 -1.96 -0.17 -1.96 -0.27 -1.97 -1.96 -0.17 -1.97 -1.97 -1.96 -0.17 -1.9	OCT N=AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	FORMULA  C2H2CL3N101 C2H2F3N101 C2H2F3N101 C2H2P3N101 C2H2O4 C2H3O6 C2H3O8R102 C2H3BR102 C2H3CL102	TRICHLORDACETAMIDE  TRIFLUGROACETAMIDE  OXALIC ACID  BROMDACETIC ACID  BROMDACETIC ACID  BROMDACETIC ACID  BROMDACETIC ACID  BROMDACETIC ACID  CHLORDACETIC ACID  CHL
263 264 265 266 267 270 271 272 273 274 275 276	OCTANOL OCTANOL DIETHYL ETHER DIETHYL ETHER CHCL3 OCTANOL DIETHYL ETHER CHCL3 DIETHYL ETHER DIETHYL ETHER DILSTHYL ETHER OILS OCTANOL CHCL3 OLETHYL ETHER OILSTHYL ETHER OILSTHYL ETHER OILSTHYL ETHER OILSTHYL ETHER	210 56 3 113 210 210 112 112 23 2 217 217 174	32	-0.52 -0.53 -1.03 -0.96 -1.05 -0.19 1.23 -0.20 -2.54 -2.54 -3.33 -0.90 -0.48	-0.52 = -0.53 = -0.53 = -0.79 A -0.29 N -1.05 = -0.19 = 1.20 A -1.41 B -1.41 B -1.41 A -0.90 = -0.43 B	C2H48RIN101 C2H4CLIN101 C2H4CLIN101 C2H4CLIN101 C2H4CIN101 C2H4IN101 C2H4IN101 C2H4N252 C2H4N252 C2H4N4 C2H4N4 C2H4N4 C2H4N4 C2H4N4 C2H4N4 C2H4N4 C2H4N4 C2H4N4 C2H4N4 C2H4N4 C2H4N4 C2H4N4 C2H4N4 C2H4N4	BROMOACETANIDE CHLOROACETANIDE CHLOROACETANIDE CHLOROACETANIDE CHLOROACETANIDE CHLOROACETANIDE FLUOROACETANIDE IODOACETANIDE OXAMIDE, DITHIO OXAMIDE, DITHIO CYANGGUANIDINE/DICYANDIAMIDE/ CYANGGUANIDINE/DICYANDIAMIDE/ CYANGGUANIDINE/DICYANDIAMIDE/ CYANGGUANIDINE/DICYANDIAMIDE/ CYANGGUANIDINE/DICYANDIAMIDE/ CYANGGUANIDINE/DICYANDIAMIDE/ CYANGGUANIDINE/DICYANDIAMIDE/ Z-AMINO-1, 3, 4-THIADIAZOLE-5-SULFONAMIDE ACETALDEHYDE
790122882288901238456788901234567899	DIETHYL ETHER DIETHYL ETHER CHCL3 OCTANOL OLETHYL ETHER DIETHYL ETHER	112		0.74 0.18 0.87 -0.17 -0.35 -0.30 -0.33 -0.34 -0.34 -1.15 -1.52 -1.60 -1.70 -1.58	0.76 A 0.28 A	C2H401 S1 C2H401 S1 C2H401 S1 C2H402	THIOACETIC ACID

NO.	SOLVENT	REF	FOOT	LOGP	LUGP	EMPIRICAL SORMULA	ACETIC ACID ACETIC
			NUIE	SULV	OC 1	FORMULA	
301	SENZENE BENZENE	51 45		-1.97	-0.56 A	C2H4O2	ACETIC ACID
303	BENZENE	14		-2.00	-0.59 A	C2H4O2	ACETIC ACID
304	BENZENE	40	12	-2.20	-0.79 A	C2H4O2	ACETIC ACID
305	BENZENE BENZENE	66		-1.74	-0.33 A	C2H4U2 C2H4U2	ACETIC ACID
307	N-BUTANOL	190		0.09	-0.40	C2H4O2	ACETIC ACID
308	I-BUTANOL	184		0.07	-0.42 A	C2H4O2 C2H4O2	ACETIC ACID
310	XYLENE	42		-1.92	-0.29 A	C2H4G2	ACETIC ACID
311	TOLUENE	42		-1.90	-0.09 A	C2H4O2	ACETIC ACID
313	NITROBENZENE	48		-1.44	-0.32 -0.32	C2H4O2	ACETIC ACID
314	PRIM. PENTANOLS	190		-0.02	-0.42	C2H4O2	ACETIC ACID
315	PRIM. PENTANOLS	184		-0.03	-0.34	C2H4U2 C2H4U2	ACETIC ACID
317	PRIM. PENTANOLS	177		-0.04	-0.35	C2H402	ACETIC ACID
318	ETHYL ACETATE	194		-0.18	-0.24	C2H4O2	ACETIC ACID
319	CCL4	14		-2.45	-0.23 A	C2H4D2	ACETIC ACID
321	DI-I-PR. ETHER	190		-0.73	-0.31	C2H4O2	ACETIC ACID
322	DI-I-PR. ETHER	221		-0.77	-0.31 A	C2H4D2 C2H4D2	ACETIC ACID
324	DI-I-PR. ETHER	222		-0.61	-0.17	C2H402	ACETIC ACID
3 2 5	HEXANE	14		-2.84	0.47	C2H4O2	ACETIC ACID
327	ME-I-BUT.KETONE	195		-0.32	-0.35	C2H4O2	ACETIC ACID
328	OLEYL ALCOHOL	5		-0.66	-0.09	C2H402	ACETIC ACID
3 2 9	CYCLOHEXANOL	223	12	-0.06	-1.18	C2H4O2	ACETIC ACID
331	S-PENTANOL S	190		0.16	-0.11	C2H402	ACETIC ACID
332	S-PENTANOLS	195		-0.03	-0.34	C2H4U2 C2H4U2	ACETIC ACID
334	CS2	165		-2.62		C2H402	ACETIC ACID
335	PARAFFINS	197	12	-1.32		C2H4O2 C2H4O2	ACETIC ACID
337	OCTANOL			-1.11	-1.11 =	C2H4O3	HYDROXYACETIC ACID/GLYCOLIC ACID/
338	DIETHYL ETHER	192		-1.55	-1.23 A	C2H4O3	HYDROXYACETIC ACID/GLYCOLIC ACID/
340	OILS	224		1.57	1.74 8	C2H58R1	ET HYL BROMIDE
341	OILS	224		1.38	1.54 8	C2H5CL1	ETHYL CHLORIDE
342	DIETHYL ETHER	180	50	2.45	2.00 = 2.27 A	C2H511	ETHYL IODIDE
344	OCTANOL	56		-0.13	-0.13 =	C2H5N101	ACETALDOXINE
345 346	DIETHYL ETFER	112		-2.60	-1.46 B	C2H5N101 C2H5N101	ACET AM I DE
347	CHCL3	112		-2.00	-1.26 N	C2H5N101	ACETAMIDE
348	OILS DIETHYL ETHER	192	12	-3.08	-1.58 A	C2H5N101 C2H5N102	AMINDACETIC ACID/GLYCINE/
350	N-BUTANOL	225		-1.81	-3.03	C2H5N102	AMINDACETIC ACID/GLYCINE/
351	SEC-BUTANOL S-PENTANOLS	195	19	-1.01	~1.92 -2.39	C2H5N1O2 C2H5N1O2	AMINDACETIC ACID/GLYCINE/
353	DIETHYL ETHER	3		-0.85	-0.63 A	C2H5N102	D-METHYL CARBAMATE
354 355	DILS	224		-1.60	-0.26 A	C2H5N1O2	O-METHYL CARBAMATE
356	OILS	214		-1.40	-0.04 A	C2H5N102	O-METHYL CARBAMATE
357	OCTANOL DISTHAL STREET	186		0.18	0.18 = 0.36 A	C2H5N102 C2H5N1S1	NITRUEIMANE THIDACETANIDE
359	CHCL3	112		-1.14	-0.46 N	C2H5N1S1	THIOACETAHIDE
360	OCTANOL	226		-0.16	-0.16 =	C2H5N3O2	1-METHYL-1-NITROSDUREA (23909)
362	CCL4	228		-0.04	-0.09 B	C2H6F103P1	DIMETHYLFLUOROPHOSPHATE
363	DIETHYL ETHER	3		-2.92	-1.75 A	C2H6N2O1	METHYL UREA
365	DIETHYL ETHER	3		-3.55	-2.98 A	C2H6N2O2	METHYLOLUREA
366	DIETHYL ETFER	198		-1.64	-1.31 A	C2H6N2S1	METHYLTHIOUREA
367 368	DIETHYL ETHER	3		-0.58	-0.32 =	C2H601	ET HANGL
369	DIETHYL ETHER	198	12	0.28	0.37 A	C2H601	ET HANOL
370 371	DIETHYL ETHER CYCLOHEXANE	174 82		-0.57 -2.37	-0.38 A	C2H601 C2H601	ET HANOL ET HANOL
372	CYCLOHEXANE	229		-1.96		C2H6B1	ETHANOL
373 374	CHCL3 OILS	174 230		-0.85 -1.52	-0.18 N -0.19 A	C2H601 C2H601	ET HANOL ET HANOL
375	OILS	173		-1.45	-0.13 A	C2H601	ET HANOL
376 377	OILS OILS	101 200		-1.45 -1.49	-0.11 A		ET HANOL
378	DILS	70		-1.33	0.00 A	C2H6O1	ETHANDL
379	BENZENE	82 231		-1.58 -1.49	-0.18 A	C2H601 C2H601	ET HANOL ET HANOL
380 381	BENZENE BENZENE	232	12	-0.01	1.37 A		ETHANDL
382	CCL4	233	12	-1.61	0.47 A	C2H601	ET HANOL
383 384	HEXANE OLEYL ALCOHOL	82 82		-2.26 -1.00	-0.43	C2H601 C2H601	ET HANOL ET HANOL
385	C\$2	233		-1.84		C2H6O1	ETHANOL
386 387	OCTANOL CCL4	9 234	12	-2.03 -1.51	-2.03 =	C2H601S1 C2H601S1	DIMETHYLSULFOXIDE DIMETHYLSULFOXIDE
388	DCTANGL	9		-1.93	-1.93 =	C2H6O2	ETHANE-1,2-DIOL/ETHYLENE GLYCOL/
389 390	DIETHYL ETHER DILS	3 2		-2.27 -3.31	-1.88 A -1.79 A	C2H6O2 C2H6O2	ETHANE-1,2-DIOL/ETHYLENE GLYCOL/ ETHANE-1,2-DIOL/ETHYLENE GLYCOL/
391	OCTANOL	235		1.77	1.77 =	C2H6S2	DIMETHYLDISULFIDE
392 393	DIETHYL ETHER BENZENE	3 205		-1.22 -0.82	-0.23 B -0.02	C2H7N1 C2H7N1	DIMETHYLAMINE DIMETHYLAMINE
394	I-BUTANGL	184		0.10	-0.38	C2H7N1	DIMETHYLAMINE
395 396	XYLENE TOLUENE	46 205		-0.68 -1.08	-0.10 B -0.12 B	C2H7N1 C2H7N1	DIMETHYLAMINE DIMETHYLAMINE
397	TOLUENE	68		-1.28	-0.27 B	C2H7N1	DIMETHYLAMINE
398 399	DIETHYL ETHER XYLENE	3 46		-1.18	-0.19 B -0.08 B	C2H7N1 C2H7N1	ETHYLAMINE ETHYLAMINE
400	TOLUENE	68		-1.28	-0.27 B	C2H7N1	ETHYLAMINE

NO.	SOLVENT	REF FO	OT LO		EMPIRICAL FORMULA	NAME
401	OCTANOL	5	-1%		C2H7N1O1	ETHANOLAMINE
402 403	DIETHYL ETHER PRIM. PENTANOLS		50 -2. L7 -0.		C2H7N1O1 C2H7O4P1	ET HANOL AMINE PHOS PHATE, MONO ETHYL
404	OCTANOL	206	1.	6 1.96 =	C3H1BR3N2	IMIDAZOLE, 2, 4, 5-TRIBROMO
405 406	OCTANOL OCTANOL	206 206	1.		C3H1CL3N2 C3H1I3N2	IMIDAZOLE, 2, 4, 5-TRICHLORO IMIDAZOLE, 2, 4, 5-TRIIODO
407	DIETHYL ETHER	237	0.	0.15 A	C3H2N2	MALONONITRILE MALONONITRILE
408 409	CHCL3 DIETHYL ETHER	237 112	-0.		C3H2N2 C3H2O2	ACETYLENE CARBOXYLIC ACID/PROPIOLIC ACID/
410	CHCL3	112	-1.		C3H2O2 C3H3F5O1	ACETYLENE CARBOXYLIC ACID/PROPIOLIC ACID/) PROPANOL: 2,2,3,3,3-PENTAFLUORO
411 412	OCTANOL OCTANOL	5	1. -0.	92 -0.92 =	C3H3N1	ACRYLONITRILE
413 414	OCTANOL DIETHYL ETHER	56 207	-0.		C3H3N1O1 C3H3N1O2	ISOXAZOLE CYANDACETIC ACID
415	DIETHYL ETHER	112	-0.	3 -0.26 A	C3H3N1O2	CYANDACETIC ACID
416 417	DIETHYL ETFER CHCL3	66 112	-0.·		C3H3N1 O2 C3H3N1 O2	CYANGACETIC ACID CYANGACETIC ACID
418	BENZENE	66 1 218	0.	76 0.63 A		CYANDACETIC ACID THIAZOLE
419 420	OCTANOL OCTANOL	218	0.	2 0.22 =	C3H3N3O2	AZAURACIL
421 422	DIETHYL ETHER DIETHYL ETHER	207 46	0.1		C3H4BR2G2 C3H4BR2G2	A,B-DIBROMOPROPIONIC ACID A,B-DIBROMOPROPIONIC ACID
423	CHCL3	46	-0.	2 0.84 A	C3H4BR2O2	A, B-DIBROMOPROPIONIC ACIO
424 425	XYLENE OILS	46 173	-0.		C3H4BR2O2 C3H4CL2O1	A, B-DIBROMOPROPIONIC ACID 1, 3-DICHLOROACETONE
426 427	OCTANOL OCTANOL	238 56	0. -1.		C3H4N2 C3H4N2O2	PYRAZOLE Hydantoin
428	DIETHYL ETFER	192	0.	6 0.43 A	C3H4D2	ACRYLIC ACID
429 430	ME-I-BUT.KETONE DIETHYL ETHER	195 112	-0.0		C3H4O2 C3H4O3	ACRYLIC ACID A-KETOPROPIONIC ACID/PYRUVIC ACID/
431	DIETHYL ETHER	46	-0.	1 -0.24 A	C3H4O3	A-KETOPROPIONIC ACID/PYRUVIC ACID/
432 433	CHCL3	112 46	-2.: -1.:		C3H4O3 C3H4O3	A-KETOPROPIONIC ACID/PYRUVIC ACID/ A-KETOPROPIONIC ACID/PYRUVIC ACID/
434	XYLENE	46 5	-1.: -0.:	2 0.13 A	C3H4O3 C3H4O3	A-KETOPROPIONIC ACID/PYRUVIC ACID/ A-KETOPROPIONIC ACID/PYRUVIC ACID/
435 436	OLEYL ALCOHOL DIETHYL ETHER	212	-0.	9 -0.75 A	C3H4O4	MALONIC ACID
437 438	DIETHYL ETHER DIETHYL ETHER	207 194	-1.0 -0.		C3H4O4 C3H4O4	MALDNIC ACID MALDNIC ACID
439	DIETHYL ETHER	46	-0.3	4 -0.18 A	C3H404	MALONIC ACID
440 441	DIETHYL ETHER N-BUTANOL	64 194	-0.		C3H4U4 C3H4U4	MALONIC ACID MALONIC ACID
442 443	I-BUTANOL PRIM. PENTANOLS	48 48	-0.1		C3H404 C3H404	MALONIC ACID MALONIC ACID
444	ETHYL ACETATE	194	-0.	5 -0.75	C3H4D4	MALONIC ACID
445 446	HEXANOL ME-1-BUT.KETONE	74 195	-0.		C3H4O4 C3H4O4	MALONIC ACID MALONIC ACID
447	OLEYL ALCOPOL	5	-1.	8 -0.70	C3H4O4	MALONIC ACID MALONIC ACID
448 449	S-PENTANOLS N-BUTANOL	195 181 1	-0.4		C3H4O4 C3H4O7P1	PHOSPHOGLYCERATE ANION
450 451	PRIM. PENTANOLS HEXANOL		0 0.1 8 -0.5		C3H4O7P1 C3H4O7P1	PHOSPHOGLYCERATE ANION PHOSPHOGLYCERATE ANION
452	OCTANOL	5	0.	2 0.92 =	C3H58R102	A-BROMOPROPIONIC ACID
453 454	DIETHYL ETHER DIETHYL ETHER	3 207	1.0	4 1.03 A	C3H58R102 C3H58R102	A-BROMOPROPIONIC ACID A-BROMOPROPIONIC ACID
455 456	DIETHYL ETHER	46 29	1.5 -0.6	0 1.44 A	C3H58R102 C3H58R102	A-BROMOPROPIONIC ACID A-BROMOPROPIONIC ACID
457	CHCL3	209	-0.	.8 1.08 A	C3H5BR102	A-BROMOPROPIONIC ACID
458 459	BENZENE XYLENE	29 46	-0.0		C3H58R1O2 C3H58R1O2	A-BROMOPROPIONIC ACID A-BROMOPROPIONIC ACID
460	TOLUENE	29	-0.	0.86 A	C3H5BR1D2	A-BROMOPROPIONIC ACID B-BROMOPROPIONIC ACID
461 462	CHCL3 OILS	29 209	-0.	4 0.91 A	C3H5BR102 C3H5BR102	B-BROMOPROPIONIC ACID
463 464	BENZENE Toluene	29 29	-0.		C3H5BR102 C3H5BR102	B-BROMOPROPIONIC ACID B-BROMOPROPIONIC ACID
465	OILS	239	2.	.6 2.14 8	C3H5CL1N2O6	2,3-PROPANEDIOL DINITRATE,1-CHLORO
466 467	DIETHYL ETHER	173 207	0.0		C3H5CL101 C3H5CL102	CHLOROACETONE A-CHLOROPROPIONIC ACID
468	DIETHYL ETHER .	207 29	0.0	2 0.66 A	C3H5CL102 C3H5CL102	B-CHLOROPROPIONIC ACID B-CHLOROPROPIONIC ACID
470	CHCL3	209	-0.	3 0.76 A	C3H5CL102	B-CHLOROPROPIONIC ACID
	BENZENE	29 29	-1.0		C3H5CL102 C3H5CL102	B-CHLOROPROPIONIC ACID B-CHLOROPROPIONIC ACID
473	CHCL 3	29 46	-0.	0.85 A	C3H5 [ 1 0 2 C3H5 [ 1 0 2	B-IODOPROPIONIC ACID B-IODOPROPIONIC ACID
	CHCL3 BENZENE	29	-0.:	2 0.86 A	C3H5 [ 1 O2	B-IODOPROPIONIC ACID
	XYLENE TOLUENE	46 29	-0.1		C3H5I1O2 C3H5I1O2	B-IODOPROPIONIC ACID B-IODOPROPIONIC ACID
478	DIETHYL ETHER	46	1.	.5 1.13 A	C3H5[102	B-IODOPROPIONIC ACIDO
	OCTANOL OCTANOL	186 5	0.1		C3H5N1 C3H5NI	PROPIONITRILE PROPIONITRILE
	OILS OILS	239 240	2.0		C3H5N3O9 C3H5N3O9	GLYCERYL TRINITRATE GLYCERYL TRINITRATE
483	OCTANDL	227	0.	7 0.57 =	C3H6CL1N3O2	1-(2-CHLOROETHYL)-1-NITROSOUREA (NCS 47547)
484 485	DIETHYL ETHER OILS	2 2	-0.: -1.:			DIMETHYL CYANAMIDE DIMETHYL CYANAMIDE
486		3 1 4	2 -3.		C3H6N2O2 C3H6N2O2	MALONDIAMIDE MALONDIAMIDE
488		238	-0.6	6 -0.66 =	C3H6N2S1	IMIDAZOLIDONE, 2-THIO/ETHYLENETHIOUREA/
489 490		241 5	-1.°	'9 '4 -0.24 =	C3H6N2S1 C3H6O1	IMIDAZOLIDONE, 2-THIO/ETHYLENETHIOUREA/ ACETONE
491	DIETHYL ETHER	3 5	50 -0.2	1 -0.06 A	C3H6O1	ACETONE
493	CYCLOHEXANE CHCL3	242 243 1		2 0.39 B	C3H601	ACETONE ACETONE
	OILS OILS	230 173	-0.1			ACETONE ACETONE
496	OILS	70	-0.6	4 -0.09 B	C3H601	ACETONE
497 498	BENZENE BENZENE	182	2 -0.0	3 0.51 B	C3H6O1 C3H6O1	AC ETONE ACETONE
499 500	BENZENE BENZENE	244 1	2 -0.0		C3H601 C3H601	AC ET ONE AC ET ONE

NO.	SOLVENT	REF	FOOT NOTE		LOGP OCT	EMPIRICAL Formula	NAME
501 502	TOLUENE CCL4	188 51	12 12	-0.31 -0.37	0.43 B	C3H6O1 C3H6O1	AC ETONE AC ETONE
503	CCL4	243		-0.35	-0.25 B	C3H601	AC ET ON E
504 505	CCL 4 HEXANE	37 242		-0.34 -0.92	-0.36 8	C3H6D1 C3H6D1	AC ET ON E AC ET ON E
506 5C7	CS2 CL3CCHCL2	242 243		-0.52 0.22		C3H6O1 C3H6O1	AC ETONE AC ETONE
5C8	CF 5 CHCHCF 5	243		0.63		C3H601	ACETONE
509 510	CL2C=CCL2 CL2C=CHCL	243 243		-0.55 0.05		C3H601 C3H601	ACETONE ACETONE
511	OCTANOL	56		0.17	0.17 =	C3H601	ALLYL ALCOHOL
512 513	DIETHYL ETHER CHCL3	174 174		-0.12 -0.51	0.02 A 0.13 N	C3H6D1 C3H6D1	ALLYL ALCOHOL
514 515	DIETHYL ETHER OCTANOL	3 5		0.30	0.38 A 0.18 =	C3H6O1 C3H6O2	PROPIONALDEHYDE ACETIC ACID, METHYL ESTER
516 517	DIETHYL ETHER	3	50	0.43	0.49 A 0.20 B	C3H6O2 C3H6O2	AGETIC ACID, METHYL ESTER AGETIC ACID, METHYL ESTER
518	GILS BENZENE	245	12	0.47	0.87 B	C3H6O2	ACETIC ACID, METHYL ESTER
519 520	CCL4 CS2	245 245		0.41 0.26	0.32 B	C3H6O2 C3H6O2	ACETIC ACID. METHYL ESTER ACETIC ACID. METHYL ESTER
521 522	DCTANOL OCTANOL	218 5		0.33	0.33 = 0.25 =	C3H6O2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
523	DIETHYL ETHER	190		0.13	0.23 A.	C3H6O2	PROPIONIC ACID
524 525	DIETHYL ETHER DIETHYL ETHER	207 112		0.20	0.29 A 0.31 A	C3H6O2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
526	DIETHYL ETHER	46		0.18	0.27 A	C3H6D2	PROPIONIC ACID
527 528	DIETHYL ETHER DIETHYL ETHER	49 36		0.23 0.27	0.33 A 0.35 A	C3H6O2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
529 530	CHCL3 CHCL3	51 14		-0.78 -0.79	0.52 A 0.51 A	C3H6O2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
531	CHCL3	48		-0.79	0.50 A	C3H6O2	PROPIONIC ACID
532 533	CHCL 3	112 29		-0.85 -0.80	0.45 A 0.49 A	C3H6D2 C3H6D2	PROPIONIC ACID PROPIONIC ACID
534 535	OILS OILS	209 193		-0.80 -0.85	0.51 A 0.42 A	C3H6D2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
536	BENZENE	51		-1.20	0.25 A 0.24 A	C3H6O2	PROPIONIC ACID PROPIONIC ACID
537 538	BENZENE BENZENE	44 14		-1.16 -1.37	0.03 A	C3H6O2 C3H6O2	PROPIONIC ACIO
539 540	BENZENE N-BUTANOL	29 190		-1.22 0.51	0.18 A 0.19	C3H6O2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
541 542	I-BUTANOL	184		0.51	0.22	C3H6O2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
543	I-BUTANOL SEC-BUTANOL	190		0.39	0.44	C3H6O2	PROPIONIC ACID
544 545	XYLENE XYLENE	48 46		-1.32 -1.24	0.44 A	C3H6O2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
546 547	TOLUENE	51 29		-1.34 -1.33	0.39 A 0.40 A	C3H6O2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
548	TOLUENE NITROBENZENE	14		-0.80	0.21	C3H6O2	PROPIONIC ACID
549 550	NITROBENZENE PRIM. PENTANOLS	48 190		-0.75 0.54	0.28 0.30	C3H6O2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
551 552	PRIM. PENTANOLS ETHYL ACETATE	48 194		0.37	0.16	C3H6O2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
553	CCL4	14		-1.79	0.33 A	C3H602	PROPIONIC ACID
554 555	CCL4 DI-I-PR. ETHER	48 190		-1.62 -0.09	0.46 A 0.44	C3H6O2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
556 557	DI-I-PR. ETHER DI-I-PR. ETHER	221 222		-0.09	0.41 0.47	C3H6O2 C3H6O2	PROPIGNIC ACID PROPIONIC ACID
558 559	2-BUTANONE	190 195		0.40	0.14 0.14	Ç3H6O2	PROPIONIC ACID
560	OLEYL ALCOHOL	5		-0.09	0.46	C3H6O2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
561 562	O-NITROTOLUENE	48 48		-0.70 -0.86		C3H6O2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
563 564	DECALIN S-PENTANOLS	48 190		-1.44 0.58	0.36	C3H6O2 C3H6O2	PROPIGNIC ACID PROPIGNIC ACID
565	S-PENTANOLS	195		0.49	0.25	C3H6O2	PROPIONIC ACID
566 567	PARAFFINS PARAFFINS	14 197	12	-2.15 -1.28		C3H6O2 C3H6O2	PROPIONIC ACID PROPIONIC ACID
568 569	DECALIN OCTANOL	246 5		-1.56 -0.62	-0.62 =	C3H6O2 C3H6O3	PROPIONIC ACID A-HYDROXYPROPIONIC ACID/LACTIC ACID/
570	DIETHYL ETHER DIETHYL ETHER OIETHYL ETHER DIETHYL ETHER	51				****	
572	DIETHYL ETHER	112		-0.96	-0.73 A	C3H6O3	A-HYDROXYPROPIONIC ACID/LACTIC ACID/ A-HYDROXYPROPIONIC ACID/LACTIC ACID/ A-HYDROXYPROPIONIC ACID/LACTIC ACID/
573 574	DIETHYL ETHER DIETHYL ETHER DIETHYL ETHER CHCL3	46 49			-0.44 A	C3H6O3 C3H6O3	A-HYDROXYPROPIONIC ACID/LACTIC ACID/ A-HYDROXYPROPIONIC ACID/LACTIC ACID/
575	DIETHYL ETHER	213		-1.07	-0.82 A	C3H6O3	A-HYDROXYPROPIONIC ACID/LACTIC ACID/
577	CHCL3	46		-1.81	-0.81 A -0.43 A	C3H6O3	A-HYDROXYPROPIONIC ACID/LACTIC ACID/
578 579	I-BUTANOL PRIM. PENTANOLS	184 247		-0.10 -0.32	-0.65 -0.81	C3H6O3 C3H6O3	A-HYDROXYPROPIONIC ACID/LACTIC ACID/ A-HYDROXYPROPIONIC ACID/LACTIC ACID/
580	PRIM. PENTANOLS ME-I-BUT.KETONE	48		-0-40	-0.81	C3H6D3	A-HYDROXYPROPIONIC ACID /LACTIC ACID/
582	OLEYL ALCOHOL	5		-1.21	-0.64	C3H6O3 C3H6O3	A-HYDROXYPROPIONIC ACID /LACTIC ACID/
583 584	S-PENTANOLS DIETHYL ETHER	195 207		-0.31 -0.76	-0.66 -0.55 A	C3H6O3 C3H6O3	A-HYDROXYPROPIONIC ACID/LACTIC ACID/ METHOXYACETIC ACID
	DIETHYL ETHER CHCL3	112		-0.62	-0.43 A	C3H6O3	METHOXYACETIC ACID
587	ME-I-BUT-KETONE	195		-0.57	-0.58	C3H6O3	HETHOXYACETIC ACID
589	S-PENIANULS DIETHYL ETHER	1 42		-0.30 -2.05	-0.65 -1.68 A	C3H6U3 C3H6U4	A, B-DIHYDROXYPROPIONIC ACID/GLYCERIC ACID/
590 591	DIETHYL EYHER	186		2.10	2.10 = -0.85 A	C3H7BR1 C3H7CL102	1-BROMOPROPANE GLYCEROL MONOCHLOROHYDRIN
592	OILS	. 2		-1.92	-0.55 A	C3H7CL102	GLYCEROL MONOCHLOROHYDRIN
594	DIETHYL ETHER	2		-1.62	-0.59 B	C3H7N1O1	DINETHYLFORMAMIDE
595 596	CHCL3 ME-I-BUT-KETONE S-PENTANOLS DIETHYL ETHER DCTANOL DIETHYL ETHER OILS DIETHYL ETHER DIETHYL ETHER OILS DCTANOL DIETHYL ETHER DIETHYL ETHER DIETHYL ETHER	2 235		-2.31 -1.05	-0.87 A -1.05 =	C3H7N101 C3H7N101	A-HYDROXYPROPIONIC ACID/LACTIC ACID/ METHOXYACETIC ACID I-BROHOPROPANE GLYCEROL MONOCHLOROHYDRIN GLYCEROL MONOCHLOROHYDRIN GLYCEROL MONOCHLOROHYDRIN DIMETHYLFORNAMIDE DIMETHYLFORNAMIDE N-METHYLACETIMIDE PROPIONAMIDE PROPIONAMIDE
597 598	OILS OCTANOL DIETHYL ETHER CHCL3 OILS DIETHYL ETHER	3 248		2007	44.02.0	C3H7N1O1 C3H7N1O1	PROPIONAMIDE PROPIONAMIDE
599	OILS DIETHYL ETHER	2	60	-2.44	-0.99 A		PROPIONAMIDE
300	OTEINIF EINER	9	50	~1.14	-U. 68 A	COULUING	AMINOACETIC ACID, METHYL ESTER

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NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP	EMPIRICAL FORMULA	NAME
601	OCTANGL	56		-2.94	-2.94 *	C3H7N102	A-AMINOPROPIONIC ACID/ALANINE/
602	OTETHYL ETHER	3	12	-5.85	-5.00 A	C3H7N1O2 C3H7N1O2	A-AMINOPROPIONIC ACID/ALANINE/ A-AMINOPROPIONIC ACID /ALANINE/
603 604	N-BUTANOL SEC-BUTANOL	225 84	19	-1.60 -0.94	-2.74 -1.82	C3H7N1 O2	A-AMINOPROPIONIC ACID /ALANINE/
605 606	OCTANOL DIETHYL ETHER	218 3		-0.15 -0.19	-0.15 = -0.04 A	C3H7N1O2 C3H7N1O2	O-ETHYL CARBAMATE/URETHANE/ O-ETHYL CARBAMATE/URETHANE/
667	OILS	2		-1.12	0.22 A	C3H7N102	O-ETHYL CARBAMATE/URETHANE/
608 609	OILS OILS	173 82		-0.92 -1.52	0.38 A -0.15 A	C3H7N1O2 C3H7N1O2	O-ETHYL CARBAMATE/URETHANE/ O-ETHYL CARBAMATE/URETHANE/
610	DILS	214		-0.85	0.44 A	C3H7N1O2	O-ETHYL CARBAMATE/URETHANE/ O-ETHYL CARBAMATE/URETHANE/
611	OILS DIETHYL ETHER	249 3		-1.00 -2.74	0.30 A -2.28 A	C3H7N1O2 C3H7N1O2	A-HYDROXYPROPIONAMIDE/LACTAMIDE/
613	OCTANOL	186		0.65	0.65 =	C3H7NLO2	1-NITROPROPANE 1-NITROPROPANE
614	CYCLOHEXANE CHCL3	250 250		0.53 1.91	2.41 N	C3H7N102 C3H7N102	1-NITROPROPANE
616	TOLUENE	250 250		1.40	1.67 B	C3H7N102 C3H7N102	1-NITROPROPANE 1-NITROPROPANE
617 618	CCL4 OCTANE	250		0.45		C3H7N102	1-NITROPROPANE
619 620	CS2 OILS	250 240		0.85 0.45	1.46 A	C3H7N102 C3H7N105	1-NITROPROPANE GLYCERYL MONONITRATE
621	OCTANOL	181	10	0.28	0.28 =	C3H706P1	B-GLYCEROPHOSPHATE ANION
622 623	N-BUTANOL PRIM. PENTANOLS	181 181		-0.70 0.04		C3H706P1 C3H706P1	B-GLYCEROPHOSPHATE ANION B-GLYCEROPHOSPHATE ANION
624	HEXANOL	181	18	-0.04	0 (0 -	C3H706P1	8-GLYCEROPHOSPHATE ANION L-A-GLYCEROPHOSPHATE ANION
625 626	OCTANOL N-BUTANOL	181		-0.70	0.43 =	C3H7O6P1 C3H7O6P1	L-A-GLYCEROPHOSPHATE ANION
627	PRIM. PENTANOLS	181		0.21		C3H7O6P1 C3H7O6P1	L-A-GLYCEROPHOSPHATE ANION L-A-GLYCEROPHOSPHATE ANION
628 629	HEXANOL PRIM. PENTANOLS	181 181		-0.22		C3H8N1O6P1	SERINE PHOSPHATE
630 631	OILS DIETHYL ETHER	2 3		-2.64 -2.51	-1.17 A -2.07 A	C3H8N2O1 C3H8N2O1	N,N-DIMETHYLUREA DIMETHYLUREA,SYM.
632	DIETHYL ETHER	3		-2.54	-2.10 A	C3HBN2O1	DINETHYLUREA, UNSYM
633 634	OIETHYL ETHER OILS	3		-2.39 -2.77	-1.97 A -1.29 A	C3H8N2O1 C3H8N2O1	ETHYLUREA ETHYLUREA
635	DIETHYL ETHER	198	į.	~1.35	-1.06 A	C3HBN2S1	ET HYLTH LOUREA
636 637	OCTANOL DIETHYL ETHER	186		0.34 0.28	0.34 × 0.36 A	C3H8O1	PROPANOL PROPANOL
638	DIETHYL ETHER	174		-0.03	0.10 A	C3H8O1	PROPANOL PROPANOL
639 640	CYCLOHEXANE CHCL3	82 174		-1.49 -0.21	0.41 N	C3H8O1 C3H8O1	PROPANOL PROPANOL
641	01rz	173		-0.85	0.42 A 0.45 A	C3H8O1	PROPANOL PROPANOL
642 643	OILS	101 200		-0.81 -0.89	0.38 A	C3H801	PROPANOL
644	OILS BENZENE	201 82		-0.81 -0.87	0.45 A 0.48 A	C3H8O1 C3H8O1	PROPANOL PROPANOL
645 646	BENZENE	231		-0.65	0.74	C3H8O1	PROPANOL
647 648	HEXANE	82 82		-1.48 -0.45	0.12	C3H8O1 C3H8O1	PROPANOL PROPANOL
649	DIETHYL ETHER	2		-0.19	-0.04 A	C3H8O1	I-PROPANOL
650 651	DIETHYL ETFER CHCL3	174 174		-0.33 -0.35	-0.16 A 0.28 N	C3H8O1 C3H8O1	I – PROPANOL I – PROPANOL
652 653	DILS OILS	201		-1.32 -1.05	0.00 A	C3H8O1 C3H8O1	I-PROPANOL I-PROPANOL
654	OCTANOL	5		0.00	0.00 =	C3H8O2	DIMETHOXYMETHANE
655 656	DIETHYL ETFER DILS	2		-0.82 -2.25	-0.60 A -0.82 A	C3H8O2 C3H8O2	METHOXYETHANOL METHOXYETHANOL
657	DIETHYL ETHER	3	l	-1.74	-1.41 A	C3H8O2	1.2-PROPANED IOL
658 659	OILS Diethyl ether	2		-2.77 -2.00	-1.30 A -1.64 A	C3H8O2 C3H8O2	1,2-PROPANEDIOL TRIMETHYLENE GLYCOL
660	DIETHYL ETHER			-3.18	-2.66 A	C3H8O3	GLYCEROL
661 662	DIETHYL ETFER DILS	198		-2.96 -4.15	-2.47 A -2.56 A	C3H8O3 C3H8O3	GLYCEROL GLYCEROL
663	OCTANOL Diethyl ether	218		-0.03 -0.54	-0.03 = 0.37 B	C3H9N1 C3H9N1	ISOPROPYLAMINE PROPYLAMINE
664 665	XYLENE	46	•	-0.36	0.21 B	C3H9N1	PROPYLAMINE
666 667	TOLUENE OCTANGL	68 251		-0.65 0.27	0.15 B	C3H9N1 C3H9N1	PROPYLAMINE TRIMETHYLAMINE
668	DIETHYL ETHER	3	<b>,</b>	-0.34	0.54 B	C3H9N1	TRIMETHYLAMINE
669 670	DIETHYL ETHER DIETHYL ETHER	251 188		-0.26 -0.38		C3H9N1 C3H9N1	TR IMETHYLAM INE TR IMETHYLAM INE
671	CYCLOHEXANE	251		-0.44		C3H9N1 C3H9N1	TRIMETHYLAMINE TRIMETHYLAMINE
672 673		251 46		0.54 0.59	0.23 B	C3H9N1	TR IMETHYLAMINE
674 675	BENZENE BENZENE	205 251		-0.33 -0.29	0.31 B	C3H9N1 C3H9NI	TRIMETHYLAMINE TRIMETHYLAMINE
676	I-BUTANDL	1.84	•	0.49	0.18	C3H9N1	TR IMETHYLAMINE
677 678	XYLENE TOLUENE	205		-0.44 -0.36	1.45 B 0.40 B	C3H9N1 C3H9N1	TRIMETHYLAMINE TRIMETHYLAMINE
679	TOLUENE	68	ì	+0.36	0.40 8	C3H9N1	TRIMETHYLAMINE
680 681	TOLUENE CCL4	188 251		-0.34 -0.09	0.42 B	C3H9N1 C3H9N1	TRIMETHYLAMINE TRIMETHYLAMINE
682	DI-I-PR. ETHER	251		-0.36	0.10	C3H9Nl	TRIMETHYLAMINE
683 684	OCTANOL DIETHYL ETHER	5		-0.96 -2.37	-0.96 = -1.22 B	C3H9N1O1 C3H9N1O1	2-PROPANOL, 1-AMINO 2-PROPANOL, 1-AMINO
685	PRIM. PENTANOLS	236	17	-0.06	-0.38	C3H9O4P1	PHOSPHATE, HOND-N-PROPYL
686 687	OCTANOL Diethyl ether	56 3		~0.52 <b>~</b> 2.94	-1.77 B	C3H10N2	PHOSPHORIC ACID, TRIMETHYL ESTER 1,2-PROPYLENEDIAMINE
688	I-BUTANOL	4		-0.92 -3.70	-1.80	C3H10N2O1 C3H10N2O3	1,3-DIAMINOPROPANOL-2 1,3-DIAMINO-PROPANOL-2
689 690	GCTANGL	226	,	-0.95	-0.95 =	C4H3F1N2O2	5-FLUOROURACIL (19893)
691 692	OCTANOL N-BUTANOL	252		1.81	1.81 =	C4H3F701 C4H3N502	BUTANOL, 2, 2, 3, 3, 4, 4, 4-HEPTAFLUORO AZAXANTHINE
693	DIETHYL ETHER	212		1.73	1.63 A	C4H4BR2U4	1,2-DIBROMOSUCCINIC ACID
694 695	OCTANOL CHCL3	238 188		-0.40 -0.23			PYRIMIDINE SUCCINODINITRILE
696	CTANOL	235	70	-0.28	-0.28 =	C4H4N201S1	2-THIOURACIL
657 698	N-BUTANOL OCTANOL	253 218			-1.07 -1.47 =	C4H4N2O2 C4H4N2O3	URACIL Barbituric acid
699 700	DIETHYL ETHER	192 254	<u> </u>	-1.63	-1.32 A	C4H4N2O3 C4H4N2O3	BARBITURIC ACID BARBITURIC ACID
,00	CHOLD	274	•	-2.10	-1.32 N	GTATALUJ	ORBUITONIC MOID

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NO.	SOLVENT	REF FO		LOGP OCT	EMPIRICAL FORMULA	NAME
701	N-BUT ANOL	253 3	6 -1.16	-2.12	C4H4N2O3	BARBITURIC ACID
702	OCTANOL	65	-1.66	-1.66 =	C4H4N2O3 C4H4N2O4 C4H4N6O1	3-CARBOXYMETHYL SYDNONE
703 704	OCTANOL OTETHYL ETHER	227 212	-0.71 0.19	-0.71 =	C4H4N6O1 C4H4O4	8-AZAGUANINE (NCS 749)(PKA= 6.43) FUMARIC ACID
705	DIETHYL ETHER	207	0.10		C4H4O4	FUMARIC ACID
706	DIFIHAT FIREK	46	0.07	0.18 A	C4H4O4	FUMARIC ACID
7C7 7C8	I-BUTANOL ETHYL AGETATE	4 194	0.76 0.23			FUMARIC ACID FUMARIC ACID
709	CYCLOHEXANONE	194	0.54			FUMARIC ACID
710	2-BUTANONE	194	0.53	0.41		FUMARIC ACID
711 712	ME-I-BUT.KETONE ME-I-BUT.KETONE	194 195	0.08 0.22			FUMARIC ACID FUMARIC ACID
713	S-PENTANOL S	195	0.60		C4H4O4	FUMARIC ACID
714	DIETHYL ETHER	212 207	-0.82	-0.61 A	C4H4O4 C4H4O4	MALEIC ACID MALEIC ACID
715 716	DIETHYL ETHER DIETHYL ETHER	46	-1.04 -0.50			MALEIC ACID
717	I-BUTANOL	4	0.11	-0.35	C4H4O4	MALEIC ACID
719	ME-I-BUT.KETONE OLEYL ALCOHOL	195 5	-0.89	-0.66 -0.32	C4H4O4 C4H4O4	MALEIC ACID MALEIC ACID
720	3-PENIANULS	190	-0.32	-0.67	C4H404	MALEIC ACID
	OCTANOL DIETHYL ETHER	255 212	1.81 0.46			THIOPHENE BROMOSUCCINIC ACID
723	DIETHYL ETHER DIETHYL ETHER	46	0.84	0.86 A	C4H5BR104	BROMOSUCCINIC ACID
144	T DO ! MUIOF	7	0.75 -1.44		C4H58R1D4	BROMOSUCCINIC ACID BROMOSUCCINIC ACID
725 726	XYLENE OCTANOL	46 218	1.18		C4H5BR104 C4H5F302	ACETIC ACID, TRIFLUORO-ETHYL ESTER
727	OCTANOL	186	0.75	0.75 =	C4H5N1	PYRROLE
728 729	DIETHYL ETHER DIETHYL ETHER	3 113	-1.51 -1.42		C4H5N102 C4H5N102	SUCCINIMIDE SUCCINIMIDE
730	CHCL 3	113	-1.27	-0.58	C4H5N102	SUCCINIMIDE
731 732	OILS	2 173	-2.31 2.02		C4H5N102 C4H5N1S1	SUCCINIMIDE ISOTHIOCYANATE: ALLYL
733	OCTANOL	218	-0.22	-0.22 =	C4H5N3	PYRIMIDINE, 2-AMINO
		253 30 256	5 -0.68 -1.47	-1.46	C4H5N301 C4H5N302	CYTOSINE 2-METHYL-5-NITROIMIDAZQLE
736		256	-1.60		C4H5N3O2	4-METHYL-5-NITROIMIDAZOLE
737	N-BUTANOL		5 -1.54		C4H5N3O3	URAMIL 3-METHYLTHIO-4-AMINO-1,2,4-TRIAZINE-5-ONE
738 739	OCTANOL OCTANOL	134 217 D	0.38 7 -0.25		C4H6N401S1 C4H6N403S2	2-ACETYLAMINO-1,3,4-THIADIAZOLE-5-SULFONAMIDE
740	CHCI 3	217 0	7 -2.39		C4H6N403S2	2-ACETYLAMINO-1, 3, 4-THIADIAZOLE-5-SULFONAMIDE
741 742	OCTANOL OILS	218 240	-0.26 2.51		C4H6N4O3S2 C4H6N4O12	1,3,4-THIADIAZOLE-2-SULFONAMIDE,5-ACETAMIDO ERYTHRITOL TETRANITRATE
743	OTLS	257 12	2 1.66	1.81 B	C4H601	DIVINYL ETHER
744 745	OILS	258 259	0.40 1.61		C4H6O1 C4H6O1	DIVINYL ETHER DIVINYL ETHER
746	OCTANOL	260	0.60	0.60 =	C4H6O1S1	G-THIOBUTYROLACTONE
747	OCTANOL	261	0.72		C4H602	CROTONIC ACID CROTONIC ACID
748 749	OILS OILS OCTANOL OCTANOL DIETHYL ETHER OHETHYL ETHER CHCL3 CHCL3 EPM/ENF	46	0.72 0.55			CROTONIC ACID
750	CHCL3	29	-0.50		C4H602	CROTONIC ACID
751 752	BENZENE	29	-0.56 -0.91			CROTONIC ACID CROTONIC ACID
753	XYLENE	46	-1.05			CROTONIC ACID
754 755	TOLUENE DCTANOL	29 5	-1.05 -0.59		C4H6O2 C4H6O4	CROTONIC ACID SUCCINIC ACID
756	DIETHYL ETHER	212	-0.87	-0.64 A	C4H6O4	SUCCINIC ACID
757 758	DIETHYL ETHER DIETHYL ETHER	3 192		-0.60 A -0.66 A		SUCCINIC ACID SUCCINIC ACID
759	DIETHYL ETHER	194	-0.90	-0.67 A	C4H6O4	SUCCINIC ACID
760 761	DIETHYL ETHER DIETHYL ETHER	46 62	-0.65	-0.45 A -0.61 A		SUCCINIC ACID SUCCINIC ACID
762	DIETHYL ETHER	213	-0.84	-0.62 A	C4H6O4	SUCCINIC ACID
763 764	DIETHYL ETHER CHCL3	36 46		-0.63 A		SUCCINIC ACID SUCCINIC ACID
765	N-RUTANOI	194	0-00	-0.51	C4H6O4	SUCCINIC ACID
766 767	I-BUTANOL PRIM. PENTANOLS	4 182	-0.02 -0.15	-0.53 -0.59	C4H6O4 C4H6O4	SUCCINIC ACID SUCCINIC ACID
768	PRIM. PENTANOLS	48	-0.19	-0.54	C4H6D4	SUCCINIC ACID
769	ETHYL ACETATE	194	-0.63	-0.77	C4H604	SUCCINIC ACID
771	HEXANOL	74	-0.34		C4H604	SUCCINIC ACID
772	2-BUTANONE	194	0.00	-0.68	C4H6O4	SUCCINIC ACID
774	ME-I-BUT-KETONE	195	-0.69	-0.69	C4H6O4	SUCCINIC ACID
775	S-PENTANOLS	195	-0.23	-0.57	C4H604	SUCCINIC ACID
776 7 <b>77</b>	DIETHYL ETHER	3 207	-1.52	-1.22 A	C4H605 C4H605	DIGLYCOLIC ACID
778	I-BUTANOL	4	-0.31	-0.94	C4H6D5	DIGLYCOLIC ACID
779	ME-I-BUT-KETONE	195	-1.27	-1.18	C4H605 C4H605	DIGLYCOLIC ACID
781	OCTANOL	5	-1.26	-1.26 =	C4H605	MALIC ACID
782	DIETHYL ETHER	207	-1.88	-1.53 A	C4H6O5 C4H6O5	MALIC ACID MALIC ACID
784	I-BUTANOL	4	-0.63	-1.39	C4H605	MALIC ACID
785 784	OLEYE ALCOHOL	5 195	-1.74 -0.97	-1.16 -1.42	C4H6O5 C4H6O5	MALIC ACID MALIC ACID
787	ME-I-BUT.KETONE	195	-1.36	-1.27	C4H6O5	D-L-HALIC ACID
788	DIETHYL ETHER	192	-2.43	-2.02 A	C4H6D6 C4H6D6	TARTARIC ACID
790	DIETHYL ETHER	213	-2.42	-2.01 A	C4H6D6	TARTARIC ACID
791	DIETHYL ETHER	36	-2.34	-1.93 A	C4H6D6 C4H6D6	TARTARIC ACID
793	PRIM. PENTANGLS	48	-1.21	-1.84	C4H6D6	TARTARIC ACID
794	S-PENTANOLS	195	-1.10	-1.56	C4H6D6 C4H6D6	TARTARIC ACID
796	OILS	173	1.12	1.35 B	C4H7BR102	BRONDACETIC ACID. ETHYL ESTER
797 798	OCTANOL CHCL 3	5 29	0.08	1.42 =	C4H7BR102 C4H7BR102	A-BRUMOBUTYRIC ACID A-BROMOBUTYRIC ACID
799	OILS	209	0.14	1.12 A	C4H7BR102	A-BROMOBUTYRIC ACID
800	BENZENE	29	-0.08	1.33 A	CAULBRIDS	SUCCINIC ACID DIGLYCOLIC ACID DIGLYCOLIC ACID DIGLYCOLIC ACID DIGLYCOLIC ACID DIGLYCOLIC ACID MALIC ACID MALIC ACID MALIC ACID MALIC ACID MALIC ACID TARTARIC ACID

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NO.	SOLVENT	REF	FOOT NOTE		LOGP	EMPIRICAL FORMULA	NAME
801	I-BUT ANOL	. 4		1.46	1.55	C4H7BR102	A-BROMOBUTYRIC ACID
802	TOLUENE	29		-0.27	1.32 A	C4H7BR102	A-BRONDBUTYRIC ACID
803	OCTANOL	262		1.40	1.40 =	C4H7CL2O3P1	DICHLOROVINYLPHOSPHONATE.O.O-DIMETHYL DICHLOROVINYLPHOSPHONATE.O.O-DIMETHYL
804 805	DIETHYL ETHER CYCLOHEXANE	262 262		1.36 0.55	2.06	C4H7CL203P1 C4H7CL203P1	DICHLOROVINYLPHOSPHONATE,O.O-DIMETHYL
806	CHCL3	262		1.43	1.93 N	C4H7CL203P1	DICHLOROVINYLPHOSPHONATE.O.O-DIMETHYL
807	BENZENE	262		1.46	1.56 B	C4H7CL203P1	DICHLOROVINYLPHOSPHONATE.O.O-DIKETHYL
808	N-BUTANOL	262		1.65	1.83	C4H7CL203P1	DICHLORDVINYLPHOSPHONATE,O,O-DIMETHYL DICHLORDVINYLPHOSPHONATE,D,O-DIMETHYL
809	ETHYL ACETATE	262		1.48	1.53 1.52	C4H7CL203P1 C4H7CL203P1	DICHLOROVINYL PHOSPHONATE, 0,0-DINETHYL
810 811	N-BUTYL ACETATE	262 262		1.48 0.92	2.06 N	C4H7CL203P1	DICHLOROVINYLPHOSPHONATE, O. O-DIMETHYL
812	N-HEPTANE	262		0.36		C4H7CL203P1	DICHLOROVINYLPHOSPHONATE, 0.0-DIMETHYL
813	2-BUTANONE	262		0.72	0.81	C4H7CL203P1	DICHLOROVINYLPHOSPHONATE, 0.0-DIMETHYL
814	OCTANE	262		0.30 0.71		C4H7CL203P1 C4H7CL203P1	DICHLOROVINYLPHOSPHONATE,O,O-OIMETHYL DICHLOROVINYLPHOSPHONATE,O,O-DIMETHYL
815 816	CS2 OCTANOL	262 218		2.03	2.03 =	C4H7CL301	B. B. B-TRICHLORO-T-BUTANOL
817	DILS	224		1.36	2.44 A	C4H7CL301	B, B, B-TRICHLORO-T-BUTANOL
818	OILS	214		0.20	1.37 A	C4H7CL302	A, A, B-TRICL-N-BUTYRALDEHYDE HYDRATE
819	OILS	173		1.53	1.68 B 1.21 A	C4H7I102 C4H7N102	IODOACETIC ACID, ETHYL ESTER DIACETYLMONOXIME
820 821	DIETHYL ETHER CHCL3	112		0.08	0.65 N	C4H7N102	DIACETYLHONOXIME
822	PRIM. PENTANOLS	263		2.38	2.70	C4H7N1 02	DIACETYLHONOXIME
823	DIETHYL ETHER	207		-2.18	-1.80 A	C4H7N103	ACETIC ACID, ACETYLAMINO/ACETYL GLYCINE/
824	CHCL3	67		-2.78		C4H7N103	ACETIC ACID, ACETYLAMINO/ACETYL GLYCINE/ ACETIC ACID, ACETYLAMINO/ACETYL GLYCINE/
825 826	ETHYL ACETATE ME-1-BUT-KETONE	67 195		-1.56 -1.50	-1.73 -1.40	C4H7N103 C4H7N1D3	ACETIC ACID, ACETYLAMINO/ACETYL GLYCINE/
827	S-PENTANOLS	195		-0.88	-1.31	C4H7N1O3	ACETIC ACID, ACETYLAMINO/ACETYL GLYCINE/
828	OCTANOL	260		-0.05	-0.05 =		2-AZACYCLUPENTANTHIONE
829	N-BUTANOL	253		-0.31	-0.95	C4H7N5	4,5,6-TRIAMINOPYRIMIDINE
830	OCTANOL	56		-3.20	-3.20 = 1.05 A	C4H7NA102 C4H8BR1N101	BUTYRIC ACID, SODIUM SALT A-BROMO-I-BUTYRAMIDE
831 832	DILS DCTANOL	264 238		-0.15 0.34	0.34 =	C4H8BR1N101	BROMOACETAMIDE,N-ETHYL
833	OCTANOL	262		0.51	0.51 =	C4H8CL3O4P1	DIME-1-OH-2, 2, 2-TRICLETHYL PHOSPHONATE/DIPTEREX/
834	DIETHYL ETHER	262		-0.29	0.59 8	C4H8CL304P1	DIME-1-OH-2, 2, 2-TRICLETHYL PHOSPHONATE/DIPTEREX/
835	CYCLOHEXANE	262		-1.70		C4H8CL304P1	DIME-1-OH-2,2,2-TRICLETHYL PHOSPHONATE/DIPTEREX/ DIME-1-OH-2,2,2-TRICLETHYL PHOSPHONATE/DIPTEREX/
836 837	CHCL3 BENZENE	262 262		-0.10 -0.82	0.51 N 0.57 A	C4H8CL3O4P1 C4H8CL3O4P1	DIME-1-OH-2, 2, 2-TRICLETHYL PHOSPHONATE/DIPTEREX/
838	N-BUTANOL	262		0.93	0.81	C4H8CL3O4P1	DIME-1-OH-2, 2, 2-TRICLETHYL PHOSPHONATE/DIPTEREX/
839	ETHYL ACETATE	262		0.40	0.37	C4H8CL304P1	DIME-1-OH-2, 2, 2-TRICLETHYL PHOSPHONATE/DIPTEREX/
840	N-BUTYL ACETATE	262		0.45	0.85	C4H8CL304P1	DIME-1-OH-2, 2, 2-TRICLETHYL PHOSPHONATE/DIPTEREX/ DIME-1-OH-2, 2, 2-TRICLETHYL PHOSPHONATE/DIPTEREX/
841 842	CCL4 N-HEPTANE	262 262		-1.40 -2.00	0.67 A	C4H8CL304P1 C4H8CL304P1	DIME-1-OH-2, 2, 2-TRICLETHYL PHOSPHONATE/DIPTEREX/
843	2-BUTANONE	262		0.08	-0.52	C4H8CL3O4P1	DIME-1-OH-2, 2, 2-TRICLETHYL PHOSPHONATE/DIPTEREX/
844	OCTANE	262		-2.00		C4H8CL304P1	DIME-1-OH-2, 2, 2-TRICLETHYL PHOSPHONATE/DIPTEREX/
845	CSZ	262		-1.70		C4H8CL304P1	DIME-1-OH-2, 2, 2-TRICLETHYL PHOSPHONATE/DIPTEREX/
846	DCTANOL	238		0.52	0.52 =	C4H8N2 C4H8N2O2	2-IMIDAZOLINE, 2-METHYL DIMETHYLGLYOXIME
847 848	CHCL3 N-BUTANOL	265 266		-1.08	-2.16	C4H8N2O2	DINETHYLGLYOXIME
849	N-BUTANOL	253		-1.32	-2.35	C4H8N6	TETRAMINOPYRIMIDINE
850	DILS	267		0.61	0.94 B		ALLYL METHYL ETHER
851 852	DCTANOL OCTANOL	186		0.29	0.29 = 0.26 =	C4H801 C4H801	2-BUTANONE 2-BUTANONE
853	I-BUTANOL	4		1.20	1.18	C4H801	BUTYRALDEHYDE
854	OILS	259		0.83	1.20 B	C4H801	CYCLOPROPYL METHYL ETHER
855	OILS	267		0.70		C4H801	CYCLOPROPYL METHYL ETHER
856 857	GCTANGL GILS	268 258		1.04	1.04 = 0.19 B	C4H801 C4H801	ETHYL VINYL ETHER ETHYL VINYL ETHER
858	OCTANOL	186		0.73	0.73 =	C4H802	ACETIC ACID, ETHYL ESTER
859	OCTANOL	5		0.66	0.66 =	C4H802	ACETIC ACID, ETHYL ESTER
860	DIETHYL ETFER	3		0.93	0.93 A	C4H802 C4H802	ACETIC ACID, ETHYL ESTER ACETIC ACID, ETHYL ESTER
861 862	OILS OILS	2 224		0.40	0.79 B 0.94 B	C4H802	ACETIC ACID, ETHYL ESTER
863	BENZENE	245		1.01	1.25 B	C4H802	ACETIC ACID, ETHYL ESTER
864	I-BUTANOL	4		0.86	0.70	C4H8D2	ACETIC ACID, ETHYL ESTER
865	CCL4	245		0.95	2.68 A	C4H802	ACETIC ACID, ETHYL ESTER
866 867	CS2 DCTANUL	245 5		0.72 0.79	0.79 =	C4H8D2 C4H8D2	ACETIC ACID. ETHYL ESTER BUTYRIC ACID
868	DIETHYL ETHER	190		0.66	0.69 A		BUTYRIC ACID
869	DIETHYL ETHER	207	•	0.68	0.71 A	C4H8D2	BUTYRIC ACID
870	DIETHYL ETHER	46		0.66	0.69 A	C4H802	BUTYRIC ACID
871 872	DIETHYL ETHER CHCL3	49 29		0.81 -0.27	0.82 A 0.97 A	C4H802 C4H802	BUTYRIC ACID BUTYRIC ACID
873	CHCL3	46		-0.27	0.97 A	C4H802	BUTYRIC ACID
874	OILS	209		-0.21	1.05 A	C4H8O2	BUTYRIC ACID
875	OILS	220		-0.35	0.87 A	C4H802	BUTYRIC ACID
876	OILS BENZENE	193 44		-0.46	0.82 A 0.74 A	C4H8D2 C4H8D2	BUTYRIC ACID Butyric acid
877 878	BENZENE	29		-0.65 -0.65	0.73 A	C4H802	BUTYRIC ACID
879	N-BUTANOL	190		0.95	0.85	C4H802	BUTYRIC ACID
880	I-BUTANOL	4		0.97	0.86	C4H802	BUTYRIC ACID
881 882	I-BUTANOL I-BUTANOL	184 48		0.96 0.91	0.85 0.78	C4H8O2 C4H8O2	BUTYRIC ACID BUTYRIC ACID
883	SEC-BUTANOL	190		0.72	0.48	C4H802	BUTYRIC ACID
884	XYLENE	46	,	-0.78	0.93 A	C4H802	BUTYRIC ACID
885	TOLUENE	29		-0.82	0.84 A		BUTYRIC ACID
886	NITROBENZENE	48		-0.42	0.50 0.95	C4H802	BUTYRIC ACID BUTYRIC ACID
887 888	PRIM. PENTANOLS PRIM. PENTANOLS	190 184		1.05 0.97	0.95	C4H802 C4H802	BUTYRIC ACID
889	PRIM. PENTANOLS	48		1.03	1.00	C4H802	BUTYRIC ACID
890	ETHYL ACETATE	194		0.72	0.72	C4H802	BUTYRIC ACID
891 892	CCL4 DI-I-PR. ETHER	48 221		-1.02 0.24	0.99 A 0.83 A		BUTYRIC ACID BUTYRIC ACID
893	2-BUTANONE	190		0.70	0.03 A	C4H802	BUTYRIC ACID
894	OCTANE	60	47	-1.76		C4H802	BUTYRIC ACID
895	OLEYL ALCOHOL	5		0.46	1.02	C4H802	BUTYRIC ACID
896 897	O-NITROTOLUENE S-PENTANOLS	48 190		-0.44 1.01	0.86	C4H802 C4H802	BUTYRIC ACID BUTYRIC ACID
898	PARAFFINS	197		-1.15		C4H802	BUTYRIC ACID
899	DODECANE	60	47	-1.87		C4H802	BUTYRIC ACID
900	HEXADEC ANE	60	47	-1.92		C4H802	BUTYRIC ACID

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
901 902	CHCL3 CHCL3	51 29		-0.25 -0.28	1.00 A 0.96 A	C4H8O2 C4H8O2	I-BUTYRIC ACID I-BUTYRIC ACID
903 904	OILS Benzene	209 51		-0.12 -0.74	1.13 A 0.69 A	C4H8U2 C4H8U2	I-BUTYRIC ACID I-BUTYRIC ACID
905	BENZENE	29	•	-0.72	0.71 A	C4H802	I-BUTYRIC ACID
906 907	BENZENE XYLENE	46 46		-0.81 -0.80	0.58 A 0.91 A		I-BUTYRIC ACID I-BUTYRIC ACID
908	TOL UENE	51		-0.86	0.88 A	C4H8D2	I-BUTYRIC ACID
909 910	TOLUENE NITROBENZENE	29 48		-0.87 -0.42	0.82 A 0.50		I-BUTYRIC ACID I-BUTYRIC ACID
911 912	PRIM. PENTANDLS	48 37		0.99	0.95 0.61 A	C4H802 C4H802	I-BUTYRIC ACID I-BUTYRIC ACID
913	OCTANOL	5		-0.42	-0.42 =	C4H8O2	DIOXANE
914 915	CCL4 OCTANDL	234 56	12	-0.13 0.83	0.83 =	C4H802 C4H802	DIOXANE FORMIC ACID, PROPYL ESTER BUTYRIC ACID, B-HYDROXY ETHOXYACETIC ACID A-HYDROXY-I-BUTYRIC ACID A-HYDROXY-I-BUTYRIC ACID A-HYDROXY-I-BUTYRIC ACID A-HYDROXY-I-BUTYRIC ACID A-HYDROXY-I-BUTYRIC ACID
916	DIETHYL ETHER DIETHYL ETHER	46		-0.40	-0.23 A	C4H8O3 C4H8O3	BUTYRIC ACID, 8-HYDROXY
917 918	DCTANOL	207 5		-0.34 -0.36	-0.36 =	C4H803	A-HYDROXY-I-BUTYRIC ACID
919 920	DIETHYL ETHER I-BUTANOL	192		-0.65 0.08	-0.45 A -0.38	C4H8O3 C4H8O3	A-HYDROXY-I-BUTYRIC ACID A-HYDROXY-I-BUTYRIC ACID
921	OLEYL ALCOHOL	5		-0.85	-0.28	C4H803	A-HYDROXY-I-BUTYRIC ACID A-HYDROXYBUTYRIC ACID
922 923	DIETHYL ETHER DIETHYL ETHER	269 46		-0.48 -0.08	-0.31 A	C4H8O3	A-HYDROXYBUTYRIC ACID
924 925	PRIM. PENTANOLS DIETHYL ETPER	269 3		0.05 -0.43	-0.32 -0.26 A		A-HYDROXYBUTYRIC ACID LACTIC ACID, METHYL ESTER
926	OCTANOL	186		2.39	2.39 =	C4H9CL1	1-CHLOROBUTANE
927 928	OCTANOL Diethyl ether	186		-0.21 -1.24	-0.21 = -0.24 B	C4H9N1O1 C4H9N1O1	BUTYRAMIDE BUTYRAMIDE
929 930	OILS I-BUTANOL	2		-2.02	-0.65 A	C4H9N1O1 C4H9N1O1	BUTYRAMIDE BUTYRAMIDE
931	DCTANOL	235		-0.77	-0.77 =	C4H9N1O1	N, N-DIMETHYL ACETAM IDE
932 933	OCTANOL DIETHYL ETHER	218 3	12	-1.08 -5.58	-1.08 = -4.76 A	C4H9N1O1 C4H9N1O2	MORPHOLINE A-AMINOBUTYRIC ACID
934 935	N-BUTANOL [-BUTANOL	225 4		-1.34 -1.79	-2.38 -3.02	C4H9N1D2 C4H9N1D2	A-AMINOBUTYRIC ACID A-AMINOBUTYRIC ACID
936	SEC-BUT ANOL	84	19	-0.79	-1.61	C4H9N1 02	A-AMINOBUTYRIC ACID
937 938	OC LYMOR	65 270		1.01		C4H9N102 C4H9N102	2-METHYL-2-NITROPROPANE 2-METHYL-2-NITROPROPANE
939 940	OCTANGL GILS	270 235 271		2.15 0.43	2.15 = 0.81 B	C4H9N103 C4H10F103P1 C4H10F103P1 C4H10F103P1	BUTYL NITRATE Diethylflugrophosphate
941	CCL4	228		0.54	0.44 B	C4H10F103P1	DIETHYLFLUOROPHOSPHATE
942 943	CCL4 OCTANOL DIETHYL ETHER I-BUTANOL	271 5		0.54 -1.17	-1.1( -	C4H10F1U3F1 C4H10N2	DIETHYLFLUOROPHOSPHATE PIPERAZINE
944 945	DIETHYL ETHER I-BUTANOL	3	12	-1.17 -3.28 -0.60	-2.03 B -1.36	C4H10N2 C4H10N2	PIPERAZINE PIPERAZINE
946	DIETHYL ETFER	198		-0.41	-0.24 A	C4H10NZS1	PROPYLTHIOUREA
947 948	OCTANOL Diethyl ether	216 3			C.88 =		BUTANOL BUTANOL
949 950	DIETHYL ETHER CYCLOHEXANE	174 272		0.57 -0.72	0.63 A	C4H10D1 C4H10D1	BUTANOL BUTANOL
951 952	CYCLOHEXANE CHCL3	82 174		-1.12 0.45	1.03 N	C4H1001 C4H1001	BUTANOL BUTANOL
953	OILS	173		-0.28	0.94 A	C4H1001	BUTANOL
954 955	OILS Benzene	201 272		-0.20 -0.19	1.02 A 1.19 A	C4H1001 C4H1001	BUTANOL BUTANOL
956 957	BENZENE BENZENE	82 231		-0.34 -0.38	0.96 A 1.00	C4H1001 C4H1001	BUTANOL BUTANOL
958	CCL4	272		-0.44		C4H1001	BUTANOL
959 960	HEXANE OCTANE	82 59		-0.78 -0.81		C4H1001 C4H1001	BUTANGL BUTANGL
961 962	OLEYL ALCOHOL Dodecane	82 59	12	-0.19	0.38	C4H1001 C4H1001	BUTANOL BUTANOL
963	HEXADECANE	- 59		-1.08	0.03	C4H10D1	BUTANOL
964 965	OCTANOL OCTANOL	5 216		0.83 0.65	0.83 = 0.65 =	C4H1001	I-BUTANOL I-BUTANOL
966 967	DIETHYL ETPER DIETHYL ETPER	3 174		0.84 0.53	0.85 A 0.59 A	C4H1001 C4H1001	I-BUTANOL I-BUTANOL
968	CHCL 3	174		0.34	0.92 N	C4H1001	I-BUTANGL
970	OILS	101		-0.24	0.97 A	C4H1001	I-BUTANOL
971 972	OILS [-BUTANOL	201		-0.26 0.93	0.96 A 0.80	C4H1001 C4H1001	I-BUTANOL I-BUTANOL
973	OCTANOL DISTRY ETLER	186		0.61	0.61 =	C4H1001 C4H1001	S-BUTANOL S-RUTANOL
975	DIETHYL ETHER	174		0.28	0.12 Å	C4H1001	S-BUTANOL
976 977	CHCL3	2		-0.60	0.89 N	C4H1001 C4H1001	S-BUTANOL
978	OILS OCTANDI	201 186		-0.42	0.81 A 0.37 =	C4H1001 C4H1001	S-BUTANOL T-BUTANOL
980	DIETHYL ETHER	3		0.34	0.41 A	C4H1001	T-BUTANOL
981	CHCF3	174		-0.04	0.57 N	C4H1001	T-BUTANOL
983 984	OILS OILS	173 224		-0.64 -0.74	0.61 A 0.52 A	C4H1001 C4H1001	T-BUTANOL T-BUTANOL
985	OILS	201		-0.66	0.59 A	C4H1001 C4H1001	T-BUTANOL ETHYL ETHER
987	OCTANOL	5	E0	0.83	0.83 =	C4H1001	ETHYL ETHER
989	OILS	173	90	0.58	0.93 B	C4H1001	ETHYL ETHER
990 991	OILS	82 258		0.38 0.36	0.78 B	C4H1001 C4H1001	ETHYL ETHER
992 993	OILS DIETHYL ETHER	259 2		0.60	0.93 B	C4H10O1 C4H10O2	ETHYL ETHER 1.3-BUTANEDIOL
994	OILS	2		-2.37	-0.93 A	C4H1002	1.3-BUT ANED TOL
996	OILS	2		-2.68	-1.22 A	C4H1002	1,4-BUTANEDIOL
<del>9</del> 97 998	DIETHYL ETHER	5 3		-0.92 -1.54	-0.92 w	C4H1001 C4H1002	2.3-BUT ANEDIOL
999 1000	OILS OCTANOL	2 5		-2.47 -0.54	-1.03 A -0.54 =	C4H1002 C4H1002	Z,3-BUTANEDIOL ETHOXYETHANOL
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NO.	SOLVENT			LOGP	LOGP	EMPIRICAL	NAME
	,	i	NOTE	SOLV	OCT	FORMULA	
1001	DIETHYL ETFER	2			-0.50 A	C4H1002	ETHOXYETHANOL
	DILS	2		-1.72 -1.15	-0.33 A	C4H1002 C4H1002	ET HOXYETHANOL ET HOXYETHANOL
1003 1004	OILS Diethyl ether	3	12	-2.36	0.15 A -1.98 A	C4H1003	DIETHYLENEGLYCOL
1005	OILS	2		-2.58	-1.12 A	C4H1003	GLYCEROL MONOMETHYL ETHER
1006 1007	DIETHYL ETHER I-BUTANOL	3 4		-1.72 -1.43	-1.39 A -2.53	C4H1003 C4H1004	GLYCEROL, MONOMETHYLETHER ERYTHRITOL
	OCTANOL	235		2.28	2.28 =	C4H10S1	BUTANETHIOL
1009	OCTANOL	186		1.95	1.95 =	C4H10S1	DIETHYLSULFIDE
1010 1011	OCTANOL OCTANOL	251 218		0.88 0.81	0.88 = 0.81 =	C4H11N1 C4H11N1	BUTYLAMINE Butylamine
1012	OCTANOL	5		0.68	0.68 =	C4H11N1	BUTYLAHINE
1013	DIETHYL ETHER	251 251		0.11	0.94 B	C4H11N1 C4H11N1	BUTYLAMINE Butylamine
	CYCLOHEXANE CHCL3	251		0.99	0.62 B	C4H11N1	BUTYLAMINE
1016	BENZENE	251		0.14		C4H11N1	BUTYLAMINE
	I-BUTANOL XYLENE	4 46		0.92	0.79 0.64 B	C4H11N1 C4H11N1	BUTYLAMINE Butylamine
	TOLUENE	150		0.30	1.84 A	C4H11N1	BUTYLAMINE
	CCL4	251 251		0.11 -0.04	0.93 N 0.50	C4H11N1 C4H11N1	BUTYLAMINE BUTYLAMINE
1021 1022	DI-I-PR. ETHER XYLENE	46		0.10		C4H11N1	I-BUTYLAMINE
1023	OCTANOL	218		0.40	0.40 =	C4H11N1	T-SUTYLAMINE
1024 1025	OCTANOL OCTANOL	251		0.57 0.43	0.57 = 0.43 =	C4H11N1 C4H11N1	DIETHYLAMINE DIETHYLAMINE
1026		5 3		-0.28	0.68 B	C4H11N1	DIETHYLAMINE
1027	DIETHYL ETHER	251		-0.07	0.80 8	C4H11N1	DIETHYLAMINE
1028 1029	CYCLUMEXANE	251 251		-0.34 0.81	0.46 B	C4H11N1 C4H11N1	DI ETHYLAMINE DI ETHYLAMINE
	CHCL3	46		0.89	0.53 8	C4H11N1	DIETHYLAMINE
1031	BENZENE	205		-0.02		C4H11N1 C4H11N1	DI ETHYLAMINE DI ETHYLAMINE
1032 1033	BENZENE BENZENE	251 46		-0.05 -0.05		C4HIINI	DIETHYLAMINE
1034	N-BUTANOL	37		0.43	0.08	C4H11N1	DIETHYLAMINE
1035	I-BUTANOL I-BUTANOL	4 37		0.74 0.42	0.53 0.07	C4H11N1 C4H11N1	DIETHYLAMINE DIETHYLAMINE
1037	XYLENE	46		-0.10		C4H11N1	DIETHYLAMINE
1038	TOLUENE	205		-0.09	0.59 B	C4H11N1	DIETHYLAMINE
1039 1040	TOLUENE TOLUENE	68 273		-0.20 -0.24		C4H11N1 C4H11N1	DIETHYLAMINE DIETHYLAMINE
1041		182		0.88	0.73	C4H11N1	DIETHYLAMINE
1042	CCL4 CCL4	251 37		0.03	0.82 N	C4H11N1 C4H11N1	DIETHYLAMINE DIETHYLAMINE
1043		37		-0.05		C4H11N1	DIETHYLAMINE
1045	DI-BUTYL ETHER			-0.20		C4H11N1	DIETHYLAMINE
1046 1047	DI-I-PR. ETHER OCTANOL	251 5		-0.21	0.30 -1.43 =	C4H11N1 C4H11N1O2	DI ET HYL AMINE DI ET HANDLAMINE
1048	DIETHYL ETHER	3	50	-3.27		C4H11N102	DI ETHANOL AM INE
1049	I-BUTANOL	4			-1.49	C4H11N102	DI ET HANGLAM INE
1050 1051	I-BUTANOL CCL4	184 135		-0.69 0.45	-1.48 0.36 B	C4H11N102 C4H11D2P1S2	DIETHANGLAMINE PHOSPHORODITHIOTIC ACID, DIETHYL
1052	PRIM. PENTANOLS	236	17	0.46	0.28	C4H11O4P1	BUTYL PHOSPHATE
1053 1054	DI-BUTYL ETHER DI-BUTYL ETHER	236 236	17 17	-0.18 -0.27		C4H11O4P1 C4H11O4P1	BUTYL PHOSPHATE I-BUTYL PHOSPHATE
1055	CHCL3	274		-2.05		C4H11O4P1	DIETHYL PHOSPHATE
1056	NITROBENZENE	274			-0.90	C4H1104P1	DIETHYL PHOSPHATE
1057 1058	PRIM. PENTANOLS DI-I-PR. ETHER	236 274	17	0.23 -1.75	0.00 -1.50	C4H11O4P1 C4H11O4P1	DIETHYL PHOSPHATE DIETHYL PHOSPHATE
1059	ME-I-BUT.KETONE	274		-0.56	-1.07	C4H11O4P1	DIETHYL PHOSPHATE
1060 1061	S-PENTANOLS DIETHYL ETHER	274 3	12	0.35 -2.89	-1.60 B	C4H11O4P1 C4H12N2	DIETHYL PHOSPHATE TETRAMETHYLENEDIAMINE
1062	I-BUTANOL	4		-0.12		C4H12N2	TETRAMETHYLENEDIAMINE
1063	I-BUTANOL	184	76	-1.96	2 52 -	C4H13N101	TETRAMETHYLAMMONIUM HYDROXIDE  2,3,4,5,6 PENTACHLOROPYRIDINE (PKA = -1.00)
1064 1065	OCTANOL DCTANOL	275 206	75 27	3.53	3.53 = 3.08 =	C5CL5N1 C5H18R3N4	PURINE, 2, 6, 8-TRIBROMO
1066	OCTANOL	206	27	3.90	3.90 =	C5H1CL3N4	PURINE, 2, 6, 8, -TRICHLORO
1067	OCTANOL	275 275	75 75	3.32	3.32 ×	C5H1CL4N1 C5H2CL3N1	2.3.5.6-TETRACHLOROPYRIDINE (PKA= -0.80) 2.4.6-TRICHLOROPYRIDINE (PKA= -0.30)
	OCTANOL	275	75	2.68	2.77 =	C5H2CL3N1	2.3.6-TRICHLOROPYRIDINE (PKA= -0.63)
	OCTANOL		75	3.11		C5H2CL3N1	2,3,5-TRICHLOROPYRIDINE (PKA= 0.78) 2,6-DICHLORPYRIDINE (PKA= 0.36)
	OCTANOL OCTANOL	275 275	75 75	2.15 2.40		C5H3CL2N1 C5H3CL2N1	2.5-DICHLORPYRIDINE (PKA= 0.56)
1073	OCTANOL	275	75	2.11		C5H3CL2N1	2.3-DICHLORPYRIDINE (PKA= 2.79)
	OCTANOL OCTANOL	275 276	75	2.56 1.42		C5H3CL2N1 C5H4BRIN1	3.5-DICHLORPYRIDINE (PKA= 3.20) 2-BROMOPYRIDINE
1076		276		1.60		C5H4BR1N1	3-BROMOPYRIDINE /PKA= 2.84/
1077		276		1.54		C5H48RINI	4-BROMOPYRIDINE
	OCTANOL OCTANOL	275 275	75 75	1.45	1.45 = 1.43 =	C5H4CL1N1 C5H4CL1N1	2-CHLOROPYRIDINE (PKA= 3.33) 3-CHLOROPYRIDINE (PKA= 4.28)
1080	OCTANOL	275	75	1.28	1.28 =	C5H4CLIN1	4-CHLOROPYRIDINE (PKA= 4.57)
	OCTANOL OCTANOL	276 277	14	1.27	1.27 =	C5H4CL1N1 C5H4N4OL	2-CHLOROPYRIDINE HYPOXANTHINE
	N-BUTANOL	253		-0.27		. C5H4N4OL	HYPOXANTHINE
	N-BUTANOL	253		-0.34	-0.99	C5H4N4O2	XANTHINE
	OCTANOL N-BUTANOL	277 253			-2.92 = -1.85	C5H4N403 C5H4N403	URIC ACID . URIC ACID
1087	OCTANOL	227		0.01	0.01 =	C5H4N4S1	MERCAPTOPURINE/PURINE+6-THIOL/(755)
	OCTANOL DIETHYL ETMER	227 192		0.01	0.60 4	C5H4N4S1 C5H4O3	6-PURINETHIOL HYDRATE (NCS755)(PKA= 7.80) FURANE-2-CARBOXYLIC ACID
1090	DIETHYL ETHER	112		0.58	0.64 A	C5H4O3	FURANE-Z-CARBOXYLIC ACID
1091	CHCL 3	112		-0.54	0.73 A	C5H4O3	FURANE-2-CARBOXYLIC ACID TRIFLUOROACETYLACETONE
1092	CHCL3	278 279		0.30	1.48 A	C5H5F302 C5H5F302	TR I FLUOROACETYL ACETONE
1094	BENZENE	279		0.11	1.52 A	C5H5F3O2	TRIFLUORGACETYLACETONE
1095 1096		279 2 <b>79</b>		-0.14 -0.50	U.60 N	C5H5F3O2 C5H5F3O2	TRIFLUOROACETYLACETONE TRIFLUOROACETYLACETONE
1097	O-CICL. BENZENE	279		-0.05		C5H5F302	TRIFLUORDACETYLACETONE
1098 1099		218 276		2.12		C5H5F5O2 C5H5N1	PENTAFLUOROPROPIONIC ACID, ETHYL ESTER PYRIDINE /PKA = 5.23/
	OCTANOL	255		0.65		C5H5N1	PYRIDINE

NO.	SOL VENT  DIETHYL ETHER CHCL3 GIL5 BENZENE BENZENE BENZENE BENZENE I-BUTANOL XYLENE TOLUENE GOTANOL DIETHYL ETHER CHCL3 GOTANOL N-BUTANOL N-BUTANOL N-BUTANOL N-BUTANOL DIETHYL ETHER I-BUTANOL OCTANOL DIETHYL ETHER	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	PYRIDINE 2-HYDROXYPYRIDINE 3-HYDROXYPYRIDINE 3-HYDROXYPYRIDINE 3-HYDROXYPYRIDINE MOENINE ADENINE ADENINE ADENINE GUANINE ISOGUANINE ISOGUANINE ISOGUANINE ISOGUANINE 2-HIDADENINE 2-HIDADENINE 2-ANINDPYRIDINE PYRIDINE 2-ANINDPYRIDINE PYRA 3-ANINDPYRIDINE PYRA 3-ANINDPYRIDINE PYRA 4-ANINDPYRIDINE PYRA 4-ANINDPYRIDINE PYRA 4-HETHYLPYRINIDINE 4-HETHYLPYRINIDINE 1-HYDRY
1101	DIETHYL ETHER	3		0.08	0.92 8	C5H5N1	PYRIDINE
1102	CHCL3	173		-0.02	0.42 8	C5H5N1	PYRIDINE
1104	BENZENE	183		0.42	0.84 B	C5H5N1 C5H5N1	PYRIDINE PYRIDINE
1106	BENZENE	66		0.44	0.85 B	C5H5N1	PYRIDINE
1107 1108	I-BUTANUL XYLENE	46		0.86	0.70 0.92 B	C5H5N1	PYRIDINE
1109	TOLUENE	188	75	0.16	0.77 B	C5H5N1 C5H5N1	PYRIDINE PYRIDINE (PKA= 4.90)
1111	DIETHYL ETHER	248	• • •	-1.82	-0.75 B	C5H5N101	2-HYDROXYPYRIDINE
1112	DIETHYL ETHER	248		-0.32	-0.12 A	C5H5N101	3-HYDROXYPYRIDINE
1114	CHCL3	248		-1.40 -1.69	-0.06 A	C5H5N1O1 C5H5N1O1	3-HYDROXYPYRIDINE PYRIDINE,1-OXIDE
1116	OCTANOL	277	14	-0.16	-0.16 =	C5H5N5	ADENINE
1117	N-BUTANOL	253	36	0.44	0.09	CSHSNS	ADENINE
1119	N-BUTANOL N-BUTANOL	253 253	36 36	-0.35 -0.55	-1.00 -1.28	C5H5N5U1 C5H5N5U1	IS OGUANINE
1121	N-BUTANOL	253	36	-0.32	-0.96 -0.07 =	C5H5N5\$1 C5H5N5\$1	2-THIOADENINE THIOGUANINE/2-AMINOPURINE-6-THIOL/(752)
1123	DIETHYL ETHER	3		-0.11	0.75 B	C5H6N2	2-AMINOPYRIDINE
1124 1125	I-BUTANOL OCTANOL	276		0.65	0.41	C5H6N2	3-AMINOPYRIDINE /PKA = 5.98/
1126	OCTANOL	276	12	0.28	0.28 =	C5H6N2	4-AMINOPYRIDINE /PKA = 9.17/ 4-AMINOPYRIDINE
1128	OCTANOL	276	7.0	0.16	0.16 =	C5H6N2	4-METHYLPYRIMIDINE
1129 1130	OCTANOL OCTANOL	235	70	-1.20	-1.20 =	C5H6N202	1-METHYLURACIL
1131	N-BUTANOL	253 3	36	0.05	-0.44 -0.43 A	C5H6N2O2 C5H6O4	THYMINE CITRACONIC ACID
1133	DIETHYL ETHER	212		-0.45	-0.28 A	C5H6O4	ITACONIC ACID
1134	I-BUTANOL	201		0.28	-0.11	C5H6O4	IT ACONIC ACID
1136	ME-I-BUT.KETONE	195 284		-0.26 -0.32	-0.30 0.53 B	C5H6O4 C5H7N3O1	IT ACONIC ACID 3,5-DIMETHYL-4-NITROSOPYRAZOLE
1138	OCTANE	256	36	-0.39	=1.61	C5H7N302 C5H7N501	2-ETHYL-5-NITROIMIDAZOLE 4.6-DIAMINO-5-FORMAMIDO-PYRIMIDINE
1140	N-BUTANOL	253	36	-0.02	-0.54	C5H7N5S1	4,6-DIAMINO-5-THIOFORMAMIDO-PYRIMIDINE
1141 1142	OCTANOL OCTANOL	186 218		1.98	1.98 * -0.68 =	C5H8 C5H8N2O3	UREA, 1, 3-DIACETYL
1143	OCTANOL OCTANOL	134		-0.16 0.13	-0.16 = 0.13 =	C5H8N4D1SI C5H8N4D3S2	3-METHIO-4-AMINO-6-ME-1,2,4-TR[AZINE-5-ONE 2-ACETYLIMINO-3-ME-1,3,4-THIADIAZOLE-5-SULFONAMIDE
1145	CHCL3	217		-1.40		C5H8N403S2	2-ACETYLIMINO-3-ME-1,3,4-THIADIAZOLE-5-SULFONAMIDE
1146 1147	OILS	259		1.83	2.04 B	C5H801	I-PROPENYL VINYL ETHER
1148	CHCL3	285 286	4	0.77 0.76	1.90 A 2.14 A	C5H8O2 C5H8O2	ACETYL ACETONE ACETYL ACETONE
1150	BENZENE	287		0.90	2.25 A	C5H8O2 C5H8O3	ACETYLACETONE LEVULINIC ACID/B-ACETYLPROPIONIC ACID/
1152	DIETHYL ETPER	207		-0.64	-0.45 A	C5H803	LEVULINIC ACID/B-ACETYLPROPIONIC ACID/
1153 1154	DIETHYL ETHER	46		-0.49	-0.45 A	C5H8U3	LEVULINIC ACID/8-ACETYLPROPIONIC ACID/
1155	CHCL3	112		-1.19 -1.32	0.14 A 0.02 A	C5H8O3 C5H8O3	LEVULINIC ACID/B-ACETYLPROPIONIC ACID/ LEVULINIC ACID/B-ACETYLPROPIONIC ACID/
1157	I-BUTANOL	4		0.08	-0.39	C5H8O3	LEVULINIC ACID/B-ACETYLPROPIONIC ACID/
1159	DIETHYL ETHER	288		0.44	0.50 A	C5H8D4	DIMETHYLMALONIC ACID
1160	I-BUTANOL PRIM. PENTANOLS	48		0.71	0.60	C5H8O4	DIMETHYLMALONIC ACID
1162	OLEYL ALCOHOL	212		-0.31 -0.55	0.26 -0.37 A	C5H8O4 C5H8O4	DIMETHYLMALONIC ACID GLUTARIC ACID
1164	DIETHYL ETHER	207		-0.57	-0.39 A	C5H8O4	GLUTARIC ACID
1166	DIETHYL ETHER	46		-0.47	-0.29 A	C5H804	GLUTARIC ACID
1167 1168	CHCL3 N-BUTANOL	46 194		0.21	-0.43 A	C5H8U4 C5H8U4	GLUTARIC ACID GLUTARIC ACID
1169	I-BUTANOL ETHYL ACETATE	4 194		0.30	-0.08	C5H8D4 C5H8D4	GLUTARIC ACID GLUTARIC ACID
1171	ME-I-BUT.KETUNE	142		-0.45	-0.47	C5H8O4	GLUTARIC ACID GLUTARIC ACID
1173	OLEYL ALCOHOL S-PENTANOLS	195		0.16	-0.39 -0.13	C5H804 C5H804	GLUTARIC ACID
1174	OILS OILS	264 264		-0.03 -0.43	0.80 A	C5H98R1NZ0Z	A-BROMUBUTTKLUKEA
1176	OILS BENZENE	209		0.55	1.75 A	C5H98R102 C5H9BR102	A-BRONDVALERIC ACID A-BRONDVALERIC ACID
1178	TOLUENE	29		0.38	1.88 A	C5H9BR1Q2	A-BROMOVALERIC ACID
	OCTANOL DECANOL	227 289		1.53	1.93 =	C5H9CL2N3O2 C5H9CL2N3O2	1,3-BIS(2-CHLOROETHYL)-1-NITROSOUREA (NCS 409962) 1,3-BIS(2-CHLOROETHYL)-1-NITROSOUREA(409962)
1181	CHCL3 ETHYL ACETATE	67 67		-2.20	-1.40	C5H9N1 03 C5H9N1 03	A-AMINOPROPIONIC ACID, N-ACETYL A-AMINOPROPIONIC ACID, N-ACETYL
1183	OILS	290 260		-0.87 0.13	0.40 A	C5H9N1G3 C5H9N1S1	O-ETHYL CARBAMATE, N-ACETYL 2-AZACYCLOHEXANTHIONE
1185	OCTANOL OCTANOL	255		2.03	2.03 =	C5H9N1S1	THIOCYANIC ACIO, BUTYL ESTER 1.2,3-PENTANETRIOL TRINITRATE
1187	OILS OILS	239 240		1.99 1.38	2.44 A	C5H9N309 C5H9N3010	PENTAERYTHRITGL TRINITRATE
1188	OILS OILS	264 264		-0.20 -0.62	1.00 A 0.63 A	C5H108R1N101 C5H108R1N101	A-BROHO-I-VALERAMIDE A-BROHOVALERAMIDE
1190	PARAFFINS	241		-2.22		C5H10N2S1 C5H1001	IMIDAZOLIDONE.N-ETHYL-2-THIO/N-ETHYLETHYLENETHIOUREA ALLYL ETHYL ETHER
1192	OILS	258 259		1.20	1.43 B	C5H1001	CYCLOPROPYL ETHYL ETHER I-PROPENYL ETHYL ETHER
1194			12		1.60 B	C5H10O1 C5H10O2	ACETIC ACID, PROPYL ESTER
1195 1196		245 245		1.59	1.39 8	C5H10G2 C5H10G2	ACETIC ACID, PROPYL ESTER ACETIC ACID, PROPYL ESTER
1197	DIETHYL ETHER	207		1.51	1.44 A 1.09 A	C5H10O2	ACETIC ACID, TRIMETHYL ACETIC ACID, TRIMETHYL
1199	I-BUTANOL	4		1.50	1.60	C5H1002	ACETIC ACID, TRIMETHYL Propionic acid, Ethyl Ester
1200	DCTANDL	186		1.21	****	C5H10O2	the sense week brine sers.

NO.	SOLVENT	REF	FOOT	LDGP	LOGP	EMPIRICAL	NAME
1201	DIETHYL ETHER	190	NOTE	SOLV 1.24	OCT 1.20 A	FORMULA C5H10O2	VALERIC ACID
1202	DIETHYL ETHER DIETHYL ETHER	46 49		1.17	1.15 A 1.31 A	C5H1002 C5H1002	VALERIC ACID VALERIC ACID
1204	CHCL3	29		0.34	1.53 A	C5H1002	VALERIC ACID VALERIC ACID
1205 1206	CHCL3	46 209		0.32 0.48	1.51 A 1.69 A	C5H1002 C5H1002	VALERIC ACID
12C7 1208	OILS Benzene	220 44		0.41 -0.05	1.57 A 1.32 A	C5H1002 C5H1002	VALERIC ACID VALERIC ACID
1209 1210	BENZENE N-BUTANOL	29 190	,	-0.09 1.36	1.32 A 1.45	C5H1002 C5H1002	VALERIC ACID VALERIC ACID
1211	I-BUTANOL	184		1.39	1.45	C5H1002 C5H1002	VALERIC ACID VALERIC ACID
1212	SEC-BUTANOL XYLENE	46		1.06	1.43 A	C5H1002	VALERIC ACID
1214 1215	TOLUENE PRIM. PENTANDLS	29 190		-0.20 1.55	1.37 A 1.60	C5H1002 C5H1002	VALERIC ACID VALERIC ACID
1216 1217	PRIM. PENTANOLS 2-BUTANONE	184 190		1.40	1.50 1.40	C5H1002 C5H1002	VALERIC ACID VALERIC ACID
1218	OCTANE S-PENTANOLS	60 190	47	-1.18 1.44	1.35	C5H1002 C5H1002	VALERIC ACID VALERIC ACID
1220	PARAFFINS	291	12	-2.54	1000	C5H10O2	VALERIC AGID
1221	DODECANE HEXADECANE	60 60	47 47	-1.25 -1.31		C5H10O2 C5H10O2	VALERIC ACID VALERIC ACID
1223 1224	CHCL3	48 29		0.21 0.17	1.40 A 1.37 A	C5H1002 C5H1002	I-VALERIC ACID I-VALERIC ACID
1225 1226	OILS Benzene	209 29		0.27	1.51 A 1.19 A	C5H10O2 C5H10O2	I-VALERIC ACID I-VALERIC ACID
1227	I-BUTANOL	4		1.30	1.32	C5H1002 C5H1002	I-VALERIC ACID I-VALERIC ACID
1229	I-BUTANOL XYLENE	48 48		-0.31	1.48 A	C5H1002	I-VALERIC ACID
1230 1231	TOLUENE NITROBENZENE	29 48		-0.35 0.07	1.24 A 0.93	C5H1002 C5H1002	I-VALERIC ACID I-VALERIC ACID
1232 1233	PRIM. PENTANOLS CCL4	48 48		1.13	1.13	C5H1002 C5H1002	I-VALERIC ACID I-VALERIC ACID
1234 1235	O-NITROTOLUENE XYLENE	48 46		-0.05 -0.10	1.67 A	C5H1002 C5H1002	I-VALERIC ACID I-VALERIC AICD
1236	DIETHYL ETHER	3	12	-1.39	-1.10 A	C5H1004	GLYCEROL MONOACETATE/MONACETIN/
1237 1238	OILS	214 70	12	-1.22 -1.1B	0.10 A 0.14 A	C5H10O4 C5H10O4	GLYCEROL MONOACETATE/MONACETIN/ GLYCEROL MONOACETATE/MONACETIN/
1239 1240	I-BUTANOL OCTANOL	4 277	14	-1.72 -2.32	-2.92 -2.32 =	C5H1005 C5H1005	ARABINOSE Ribose
1241 1242	OCT ANOL OCT ANOL	186 218		2.33 0.85	2.33 ± 0.85 ±	C5H11F1 C5H11N1	1-FLUOROPENTANE PIPERIDINE
1243 1244	DIETHYL ETHER DIETHYL ETHER	3 46		-0.24 -0.18	0.64 B	C5H11N1 C5H11N1	PIPERIDINE PIPERIDINE
1245	CHCL3	46		0.92	0.56 B	C5H11N1	PIPERIDINE
1246 1247	8ENZENE I-BUTANOL	183 4		-0.06 0.78	0.51 B 0.59	C5H11N1 C5H11N1	PIPERIDINE Piperidine
1248 1249	XYLENE CCL4	46 234	12	0.03	0.63 B	C5H11N1 C5H11N1O1	PIPERIDINE DIMETHYLPROPIONAMIDE
1250 1251	OCTANOL OILS	218 82		-0.33 -1.15	-0.33 = 0.19 A	C5H11N101 C5H11N101	MORPHOLINE, 4-METHYL Valeramide
1252 1253	OILS OLEYL ALCOHOL	292 82	12	-0.50 -0.52	0.73 A	C5H11N101 C5H11N101	VALERAMIDE Valeramide
1254	DIETHYL ETFER	3		-0.77	0.17 B	C5H11N1O1	I-VALERAMIDE
1255 1256	OILS N-BUTANOL	2 225		-1.64 -0.98	-0.30 A -2.02	C5H11N1O1 C5H11N1O2	I-VALERAMIDE A-AMINOVALERIC ACID/NORVALINE/
1257 1258	SEC-BUTANOL OILS	84 293	19	-0.54 0.73	-1.26 1.85 A	C5H11N1O2 C5H11N1O2	A-AMINOVALERIC ACID/NORVALINE/ O-I-BUTYLCARBAMATE
1259 1260	N-BUTANOL CCL4	225 294		-1.14	-2.10	C5H11N102 C5H11N1S2	VALINE N.N-DIETHYLDITHIOCARBAMIC ACID
1261 1262	N-BUTANOL N-BUTANOL	295 295	52 52	-0.47 -0.40	-1.17 -1.07	C5H12CL1N102 C5H12CL1N10251	VALINE HYDROCHLORIDE METHIONINE HYDROCHLORIDE
1263	DILS	2	12	-2.12	-0.70 A	C5H12N2O1	N. N-DIETHYLUREA
1264 1265	DIETHYL ETHER SEC-BUTANOL	3 84	19	-1.72 -1.70	-0.50 B	C5H12N2O1 C5H12N2O2	DIETHYLUREA, UNSYM. ORNITHINE
1266 1267	OCTANOL OILS	216 201		1.40	1.40 = 1.52 A	C5H12O1 C5H12O1	PENTANOL PENTANOL
1268 1269	BENZENE CCL4	231 234	12	0.19	1.56 A	C5H1201 C5H1201	PENT ANDL PENT ANDL
1270 1271	OCTANE DODECANE	59 59		-0.19 -0.31		C5H1201 C5H1201	PENTANOL PENTANOL
1272	HEXADECANE	59		-0.39		C5H12O1	PENTANOL
1273 1274	OCTANOL DIETHYL ETHER	216 3		1.16	1.16 = 1.24 A	C5H12O1 C5H12O1	I~PENT ANOL I-PENT ANOL
	OILS OILS	173 101		0.26	1.43 A 1.52 A	C5H12O1 C5H12O1	I – PENT ANOL I – PENT ANOL
1277 1278	OILS OILS	201 201		0.32 0.17	1.48 A 1.34 A	C5H12O1 C5H12O1	I-PENT ANOL 2-PENT ANOL
1279 1280	OILS OCTANOL	201		0.20 1.36	1.37 A 1.36 =	C5H12O1 C5H12O1	3-PENT ANOL
1281	OCTANOL	80		0.89	0.89 =	C5H12O1	1-PROPANOL, 2, 2-DIMETHYL 2-PROPANOL, 2-ETHYL/T-AMYL ALCOHOL/
1282 1283	OILS	173 224		0.00	1.05 A 1.22 A	C5H1201 C5H1201	2-PROPANOL, 2-ETHYL/T-AMYL ALCOHOL/ 2-PROPANOL, 2-ETHYL/T-AMYL ALCOHOL/
1284 1285	OILS	296 201		0.15	1.33 A 1.15 A	C5H12O1 C5H12O1	2-PROPANOL, 2-ETHYL/T-AMYL ALCOHOL/ 2-PROPANOL, 2-ETHYL/T-AMYL ALCOHOL/
1286 1287	DIETHYL ETHER	218		0.84	0.84 = -0.99 A	C5H12O2 C5H12O2	DIETHOXYMETHANE 1,5-PENTANEDIOL
1288	DIES DIETHYL ETHER	2		-2.21 -1.43	-0.78 A	C5H12O2 C5H12O3	1,5-PENTANEDIOL DIETHYLENE GLYCOL MONOMETHYL ETHER
1290 1291	DIETHTE ETHER DIETHYL ETHER	2		-2.38	-0.93 A	Ç5H12O3	DIETHYLENE GLYCOL MONOMETHYL ETHER
1292	DILS	2		-1.58 -2.13	-1.27 A -0.71 A	C5H12O3 C5H12O3	GLYCERYL-A-MONDETHYL ETHER GLYCERYL-A-MONDETHYL ETHER
1293 1294	I-BUTANOL XYLENE	46		-0.85 0.44	-1.70 1.05 B	C5H12O4 C5H13N1	PENTAERYTHRITOL AMYLAMINE
1295 1296	DIETHYL ETHER OCTANOL	3 218		0.30 1.33	1.13 B 1.33 =	C5H13N1 C5H13N1	I-AMYLAMINE Methylbutylamine
1297 1298	DI-BUTYL ETPER OCTANOL	236 297	17 46	-0.14 -3.00	-3.00 =	C5H13O4P1 C5H14I1N1	AMYL PHOSPHATE TRIMETHYL-ETHYL-AMMONIUM IODIDE
1299 1300	DIETHYL ETHER I-BUTANOL	3	12	-2.56 0.16	-1.42 B -0.28	C5H14N2 C5H14N2	PENTAMETHYL ENEDIAM INE PENTAMETHYL ENEDIAM INE
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NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
1301	DCTANOL	298		3.22	3.22 =	C5H14S11	SILANE, DIMETHYL-PROPYL
1302	OCTANOL	56		2.22	2.22 =	C6F6	HEXAFLUOROBENZENE
1303 1304	OCTANOL HEXANE	206 299	27	4.17 0.18		C6H1CL4N3 C6H1CL4N3	4, 5, 6, 7—TETRACHLOROBENZOTR IAZOLE 4, 5, 6, 7—TETRACHLOROBENZOTR IAZOLE
1305	OCTANOL	.56	49	5.01	5.01 =	C6H1CL501	PENTACHLOROPHENOL
1306	HEXANE	299		2.15		C6H1CL501	PENT ACHLOROPHENOL
1307 1308	CYCLOHEXANE HEXANE	300 299		-0.52 -0.30		C6H1F501 C6H1F501	PENTAFLUOROPHENOL PENTAFLUOROPHENOL
1309	OLEYL ALCOHOL	300		2.37	2.91	C6H1F501	PENTAFLUOROPHENOL
1310	OLEYL ALCOHOL	300	46	2.09	2.64	C6H2F401	TETRAFLUGROPHENOL POTASSIUM PICRATE
1311 1312	DI-I-PR. KETONE DI-I-PR. KETONE	93 93		-1.48 -1.62		C6H2K1N3O7 C6H2N3NA1O7	SODIUM PICRATE
1313	HEXANE	299		-1.30		C6H3CL1N4O2	5-CHLORO-4-NITROBENZOTRIAZOLE
1314 1315	OCTANOL OCTANOL	56 9		3.72 3.06	3.72 = 3.06 =	C6H3CL301 C6H3CL301	2.4.5-TRICHLOROPHENOL 2.4.6-TRICHLOROPHENOL
1316	OCTANOL	56		3.69	3.69 =	C6H3CL301	2, 4, 6-TRICHLOROPHENOL
1317	CYCLOHEXANE	300		-0.15	2.53	C6H3F301 C6H3F301	TRIFLUOROPHENOL TRIFLUOROPHENOL
1318 1319	CHCL3	300 47		.1.98	2.31 A	C6H3N3O1	2.4.6-TRINITROPHENOL/PICRIC ACID/
1320	OCTANOL	218		2.03	2.03 =	C6H3N307	2.4.6-TRINITROPHENOL/PICRIC ACID/
1321 1322	8ENZENE N-BUTANOL	33 253	12 36	1.69 0.96	3.02 A 0.82	C6H3N307 C6H3N307	2,4,6-TRINITROPHENOL /PICRIC ACID/ 2,4,6-TRINITROPHENOL/PICRIC ACID/
1323	TOLUENE	42	•	0.88	2.35 A	C6H3N3O7	2.4.6-TRINITROPHENOL/PICRIC ACID/
1324	TOLUENE	36 182	12	1.71 1.85	3.08 A 2.01	C6H3N3O7 C6H3N3O7	2,4,6-TRINITROPHENOL/PICRIC ACID/ 2,4,6-TRINITROPHENOL /PICRIC ACID/
1325 1326	PRIM. PENTANOLS S-PENTANOLS	195	12	0.82	0.63	C6H3N3O7	2,4,6-TRINITROPHENOL/PICRIC ACID/
1327	TETRALIN	246		2.04		C6H3N3O7	2,4,6-TRINITROPHENOL/PICRIC ACID/
1328 1329	BRCMOFORM OCTANDL	47 10		0.04 2.64	2.64 =	C6H3N3O7 C6H4BR1N1O2	2,4,6-TRINITROPHENOL/PICRIC ACID/ BENZENE,3-BROMO-1-NITRO
1330	OLEYL ALCOHOL	124		2.01	2,56	C6H4BR201	2,4-DI BROMOPHENOL
1331	OCTANOL	10		2.39	2.39 = 2.46 =	C6H4CL1N102 C6H4CL1N102	BENZENE, 4-CHLORO-1-NITRO BENZENE, 3-CHLORO-1-NITRO
1332	OCTANDL OCTANDL	10 301		2.46	2.24 =	C6H4CL1N102	BENZENE, 2-CHLORO-1-NITRO
1334	OCTANOL	301		2.41	2.41 =	C6H4CL1N102	BENZENE, 3-CHLORO-1-NITRO
1335 1336	OCTANOL OCTANOL	301 301		2.41 3.38	2.41 = 3.38 =	C6H4CL1N102 C6H4CL2	BENZENE,4-CHLORO-1-NITRO M-DICHLOROBENZENE
1337	OCTANOL	301		3.38	3.38 =	C6H4CL2	O-DICHLOROBENZENE
1338 1339	OCTANOL OLEYL ALCOHOL	301 124		3.39 2.54	3.39 = 3.08	C6H4CL2 C6H4I201	P-DICHLOROBENZENE 2,4-DI-IOOOPHENDL
1340	OCTANOL	283	73	-0.84	-0.84 =	C6H4NINA1D3	SODIUM P-NITROPHENOXIDE
1341	OCTANOL	283	71	-1.31	-1.31 =	C6H4NINA103	SODIUM P-NITROPHENOXIDE (PKA = 7.15)
1342 1343	OCTANOL OCTANOL	10 301		1.49 1.49	1.49 = 1.49 =	C6H4N2O4 C6H4N2O4	M-DINITROSENZENE M-DINITROSENZENE
1344	OCTANOL	301		1.58	1.58 =	C6H4N2O4	O-DINITROBENZENE
1345	OCTANOL	10 301		1.46	1.46 = 1.49 =	C6H4N2O4 C6H4N2O4	P-DINITROBENZENE P-DINITROBENZENE
1346 1347	OCTANOL OCTANOL	218		1.51	1.51 =	C6H4N2O5	2.4-DINITROPHENOL
1348	OCTANOL	302		1.54	1.54 =	C6H4N2O5	2,4-DINITROPHENOL
1349 1350	OILS HEXANE	173 299	12	1.35 0.55	·2.38 A	C6H4N2O5 C6H4N2O5	2,4-DINITROPHENOL 2,4-DINITROPHENOL
1351	OCTANOL	186		1.75	1.75 =	C6H4N2O5	2, 5-DINITROPHENOL
1352 1353	OCTANOL OCTANOL	218 186		1.75 1.25	1.75 = 1.25 =	C6H4N2O5 C6H4N2O5	2,5-DINITROPHENOL 2,6-DINITROPHENOL
1354	OCTANOL	218		1.18	1.18 =	C6H4N2D5	2.6-DINITROPHENOL
1355 1356	OCTANOL OCTANOL	218 218		2.32 2.36	2.32 = 2.36 =	C6H4N2O5 C6H4N2O5	3,5-DINITROPHENOL 3,5-DINITROPHENOL
1357	OCTANDL	218		-0.13	-0.13 =	C6H4N4	ISOPROPENYLAMINE, 1,1,3-TRICYANO
1358	OCTANOL	206	27	1.95		C6H4N402	5-NITROBENZTRIAZOLE 5-NITROBENZTRIAZOLE
1359 1360	HEXANE OCTANOL	299 238		-2.60 0.20	0.20 =	C6H4N4O2 C6H4O2	QUINONE
1361	DIETHYL ETHER	3		-0.49	0.39 B	C6H4O2	QU INON E
1362 1363	DIETHYL ETHER CYCLOHEXANE	303 304		-0.51 -0.39	0.40 B	C6H4O2 C6H4O2	QU INON E
1364	OILS	305		0.27	0.69 B	C6H4O2	QU INON E
1365 1366	OCTANOL OCTANOL	10		2.99 2.63	2.99 ± 2.63 =	C6H5BR1 C6H5BR101	BROMOBENZENE M-BROMOPHENOL
1367	CYCLOHEXANE	124		-0.52		C6H5BR101	M-BROMOPHENOL
1368	METH. DECANOATE	124		2.12	2.59	C6H5BR101 C6H5BR101	M-8ROMOPHENOL M-BROMOPHENOL
1369 1370	OLEYL ALCOHOL OCTANOL	124		2.02 2.35	2.57 2.35 ≖	C6H5BR101	O-BROMOPHENOL
1371	CYCLOHEXANE	124		0.26		C6H5BR101	O-BROMOPHENOL O-BROMOPHENOL
1372 1373	METH. DECANDATE OLEYL ALCOHOL	124		1.48	1.93 1.91	C6H5BR101 C6H5BR101	O-BROMOPHENOL
1374	OCTANOL	10		2.59	2.59 =	C6H5BR101	P-BROMOPHENOL
1375 1376	CYCLOHEXANE OLEYL ALCOHOL	56 124		-0.09 2.23	2.77	C6H5BR101 C6H5BR101	P-8ROMOPHENOL P-8ROMOPHENOL
1377	OCTANOL	10		2.84	2.84 =	C6H5CLI	CHLOROBENZENE
1378	OCTANOL	217	07 07	1.91	1.91 = 1.21 A	C6H5CL1N2O4S1 C6H5CL1N2O4S1	3-NITRO-4-CHLOROBENZENESULFONAMIDE 3-NITRO-4-CHLOROBENZENESULFONAMIDE
1379 1380	CHCL3 OCTANOL	10	01	2.50	2.50 *	C6H5CL101	M-CHLOROPHENOL
1381	DCTANOL	301		2.47	2.47 =	C6H5CL101	M-CHLOROPHENOL M-CHLOROPHENOL
1382 1383	CYCLOHEXANE METH. DECANOATE	124 124		-0.70 1.96	2.43	C6H5CL101 C6H5CL101	M-CHLOROPHENOL
1384	OLEYL ALCOHOL	124		1.76	2.31	C6H5CL101	M-CHLOROPHENOL
1365 1386	OCTANOL OCTANOL	10 301		2.15	2.15 = 2.19 =	C6H5CL101 C6H5CL101	O-CHLOROPHENOL O-CHLOROPHENOL
1387	CYCLOHEXANE	124		0.08		C6H5CL101	O-CHLOROPHENOL
1388 1389	METH. DECANDATE OLEYL ALCOHOL	124		1.34	1.79 1.78	C6H5CL101 C6H5CL101	O-CHLOROPHENOL O-CHLOROPHENOL
1390	OCTANOL	10		2.39	2.39 =	C6H5CL101	P-CHLO ROPHENOL
1391 1392	OCTANGL CYCLOHEXANE	301 124		2.44 -0.70	2.44 =	C6H5CL101 C6H5CL101	P-CHLOROPHENOL P-CHLOROPHENOL
1393	CYCLOHEXANE	56		-0.26		C6H5CL101	P-CHLO ROPHENOL
1394	METH. DECANDATE	124		2.18 2.02	2.65 2.57	C6H5CL101 C6H5CL101	P-CHLOROPHENOL P-CHLOROPHENOL
1395 1396	OLEYL ALCOHOL OCTANOL	124 268		2.78	2.78 =	C6H5CL2N1	2.3-DICHLOROANILINE
1397	OCTANOL	268 217		2.69 1.44	2.69 = 1.44 =	C6H5CL2N1 C6H5CL2N1O2\$1	3,4-DICHLOROANILINE 3,4-DICHLOROBENZENESULFONAMIDE
1398 1399	OCTANOL CHCL3	217		0.52	1.64 A	C6H5CL2N102S1	3,4-DICHLOROBENZENESULFONAMIDE
1400	OCTANOL	10		2.27	2.27 =	C6H5F1	FLUOROBENZENE

NO.	SOLVENT	REF	FOOT		LOGP OCT	EMPIRICAL FORMULA	NAME
1501	OCTANOL	10		1.88	1.88 =	C6H6CL1N1	M-CHLOROANIL INE
1502 1503	OCTANOL CYCLOHEXANE	301 314		1.90 0.89	1.90 =	C6H6CL1N1 C6H6CL1N1	M-CHLOROANILINE M-CHLOROANILINE
1504	BENZENE	313		1.93	1.88 B	C6H6CL1N1	M-CHLOROANILINE M-CHLOROANILINE
1505 1506	BENZENE CCL4	315 314		1.94 1.37	1.91 8	C6H6CL1N1 C6H6CL1N1	M-CHLOROANIL INE
15C7 1508	N-HEPTANE HEXADECANE	314 314		0.71 0.64		C6H6CL1N1 C6H6CL1N1	M-CHLOROANILINE M-CHLOROANILINE
1509	OC TANOL	268		1.90	1.90 =	C6H6CL1N1	O-CHLOROANIL INE
1510 1511	OCTANOL CYCLOHEXANE	301 314		1.92 1.25	1.92 =	C6H6CL1N1 C6H6CL1N1	O-CHLOROANIL INE O-CHLOROANIL INE
1512 1513	BENZENE BENZENE	314 315		2.13 2.08	2.02 B 1.99 B	C6H6CL1N1 C6H6CL1N1	O-CHLOROANILINE O-CHLOROANILINE
1514 1515	CCL4 N-HEPTANE	314 314		1.73		C6H6CLINI C6H6CLINI	C-CHLOROANIL INE C-CHLOROANIL INE
1516	HEXANE	314		1.11		C6H6CL1N1	O-CHLORDANIL INE
1517 1518	OCTANE HEXADECANE	314 314		1.03		C6H6CL1N1 C6H6CL1N1	O-CHLOROANILINE O-CHLOROANILINE
1519 1520	DECANE OCTANOL	314 301		1.12	1.83 =	C6H6CL1N1 C6H6CL1N1	O-CHLORGANILINE P-CHLORGANILINE
1521	CYCLOHEXANE	314		0.69		C6H6CL1N1	P-CHLOROANIL IN E
1522 1523	BENZENE BENZENE	314 313		1.82 1.81	1.81 B	C6H6CL1N1 C6H6CL1N1	P-CHLOROANILINE P-CHLOROANILINE
1524 1525	BENZENE BENZENE	72 315		1.91 1.80	1.87 B	C6H6CL1N1 C6H6CL1N1	P-CHLOROANILINE P-CHLOROANILINE
1526	CCL4	314		1.31		C6H6CL1N1	P-CHLOROANIL INE
1527 1528	DI-PENTYL ETHER N-HEPTANE	31 <del>5</del> 75		0.64		C6H6CL1N1 C6H6CL1N1	P-CHLOROANILINE P-CHLOROANILINE
1529 1530	N-HEPTANE N-HEPTANE	314 315		0.57 0.64		C6H6CL1N1 C6H6CL1N1	P-CHLOROANILINE P-CHLOROANILINE
1531	PARAFFINS	316		0.50		C6H6CL1N1	P-CHLOROANIL IN E
1532 1533	HEXADECANE OCTANOL	314 217	07	0.56 1.29	1.29 =	C6H6CL1N1 C6H6CL1N1D2S1	P-CHLORDANILINE M-CHLOROSENZENESULFONAMIDE
1534 1535	CHCL3 GCTANOL	217 217	07 07	0.26 0.74	0.89 N 0.74 =	C6H6CL1N102S1 C6H6CL1N1G2S1	M-CHLOROBENZENESUL FONAMIDE D-CHLOROBENZENESUL FONAMIDE
1536	CHCL 3	217	07	0.46	0.96 N	C6H6CL1N102S1 C6H6CL1N102S1	O-CHLOROBENZENESULFONAMIDE P-CHLOROBENZENESULFONAMIDE
1537 1538	CHCL3	217 217	07 07	0.84 0.14	0.84 = 0.69 N	C6H6CL1N102S1	P-CHLOROBENZENESUL FONAMIDE
1539 1540	HEXANE OCTANOL	317 312		3.24 1.30	1.30 =	C6H6CL6 C6H6F1N1	1,2,3,4,5,6-HEXACHLOROCYCLOHEXANE /LINDANE/ M-FLUOROANILINE
1541	OCTANOL	10 312		1.30	1.30 =	C6H6F1N1 C6H6F1N1	M-FLUORDANIL INE G-FLUORDANIL INE
1542 1543	OCTANOL OCTANOL	10		1.15	1.15 =	C6H6F1N1	P-FLUOROANIL INE
1544 1545	OCTANOL OCTANOL	312 312	12	2.98 3.34	2.98 = 3.34 =	C6H6[]N] C6H6[]N]	M-IODOANILINE O-IODOANILINE
1546 1547	OCTANOL DIETHYL ETHER	312 112	12	3.34 -1.72	3.34 ∓ -0.61 B	C6H6I1N1 C6H6N2O1	P-IODOANILINE NICOTINAMIDE/3-CARBANYLPYRIDINE/
1548	CHCL3	112		-1.37	-1.40 B	C6H6N201	NICOTINAMIDE/3-CARBAMYLPYRIDINE/
1549 1550	CHCL3 OCTANOL	318 10		-1.22 1.37	-1.27 B	C6H6N2O1 C6H6N2O2	I-NICOTINAMIDE M-NITROANILINE
1551 1552	OCTANOL Diethyl ether	301 112		1.37	1.37 = 1.61 A	C6H6N2O2 C6H6N2O2	M-NITROANILINE M-NITROANILINE
1553	CYCLOHEXANE	319 314		-0.42 -0.42		C6H6N2O2 C6H6N2O2	M-NITROANILINE M-NITROANILINE
1554 1555	CYCLOHEXANE CHCL3	112		1.61	1.13 8	C6H6N2O2	M-NITROANILINE
1556 1557	CHCL3 BENZENE	254 319		1.59 1.31	1.12 B 1.46 B	C6H6N2O2 C6H6N2O2	M-NITROANILINE M-NITROANILINE
1558 1559	BENZENE BENZENE	314 72		1.30 1.36	1.45 B 1.49 B	C6H6N2O2 C6H6N2O2	M-NITROANILINE M-NITROANILINE
1560	TOLUENE	319		1.19	1.49 8	C6H6N2O2	M-NITROANILINE M-NITROANILINE
1561 1562	CCL4	319 314		0.45 0.43	1.39 N	C6H6N2O2	M-NITROANILINE
1563 1564	N-HEPTANE N-HEPTANE	319 254		-0.57 -0.62		C6H6N2O2 C6H6N2O2	M-NITROANILINE M-NITROANILINE
1565	N-HEPTANE	314 314		-0.56 -0.61		C6H6N2O2	M-NITROANILINE M-NITROANILINE
1566 1567	OCTANE CS2	319		0.52		C6H6N2O2	M-NITROANILINE
1568 1569	OCTANOL OCTANOL	312 186		1.44 1.83	1.44 = 1.83 =	C6H6N2O2 C6H6N2O2	O-NITROANILINE O-NITROANILINE
1570 1571	OCTANOL DIETHYL ETHER	301 112	50	1.79 1.95	1.79 = 1.83 A	C6H6N2O2 C6H6N2O2	O-NITROANILINE O-NITROANILINE
1572	CYCLOHEXANE	319	20	0.36		C6H6N2O2	O-NITROANILINE O-NITROANILINE
1573 1574	CYCLOHEXANE CHCL3	314 112		-0.70 2.13	1.60 B	C6H6N2O2 C6H6N2O2	O-NITROANILINE
1575 1576	BENZENE BENZENE	319 72		1.78 1.81	1.79 8 1.81 8	C6H6N2O2 C6H6N2O2	O-NITROANILINE O-NITROANILINE
1577	TOLUENE	319		1.64	1.84 B 2.25 N	C6H6N2D2 C6H6N2D2	O-NITROANILINE O-NITROANILINE
1578 1579	CCL4 CCL4	319 314		1.08 1.08	2423 N	C6H6N2O2	O-NITROANILINE
1580 1581	N+HEPTANE N-HEPTANE	319 315		0.25 0.25		C6H6N2O2 C6H6N2O2	O-NITROANILINE O-NITROANILINE
1582 1583	HEXANE	319 82		0.21 1.15	1.71	C6H6N2O2 C6H6N2O2	O-NITROANILINE O-NITROANILINE
1584	CS2	319		1.14		C6H6N2O2	O-NITROANILINE P-NITROANILINE
1585 1586	OCTANOL DIETHYL ETHER	112		1.39	1.39 = 1.41 A		P-NITROANIL INE
1587 1588	CYCLOHEXANE CYCLOHEXANE	319 314		-1.00 -1.00		C6H6N2U2 C6H6N2U2	P-NITROANILINE P-NITROANILINE
1589 1590	CHCL3 CHCL3	112 254		1.23	0.78 B	C6H6N2O2 C6H6N2O2	P-NITROANILINE P-NITROANILINE
1591	BENZENE	319		0.92	1.19 B 1.19 B	C6H6N2O2 C6H6N2O2	P-NITROANILINE P-NITROANILINE
1592 1593	BENZENE BENZENE	314 72		0.93	1.21 8	C6H6N2O2	P-NITROANILINE
1594 1595	TOLUENE CCL4	319 319		0.78 -0.13	1.19 B 0.61 N	C6H6N2O2 C6H6N2O2	P-NITROANILINE P-NITROANILINE
1596 1597	CCL4 N-HEPTANE	314 319		-0.14 -1.14		C6H6N2O2 C6H6N2O2	P-NITROANILINE P-NITROANILINE
1598	N-HEPTANE N-HEPTANE	254 314		-0.89 -1.13		C6H6N2O2 C6H6N2O2	P-NITROANILINE P-NITROANILINE
1599 1600	OCTANE	314		-1.25		C6H6N2O2	P-NITROANIL INE
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NO.	SOLVENT	REF	FOOT NOTE		LOGP OCT	EMPIRICAL Formula	NAME
1601	CS2	319		0.05		C6H6N2O2	P-NITROANILINE
1602	CS2	314		0.05		C6H6N2O2	P-NITROANILINE
1603	DIETHYL ETHER	320		1.80	1.70 A	C6H6N2 02 C6H6N2 02	N-NITROSOPHENYLHYDROXYL AMINE N-NITROSOPHENYLHYDROXYL AMINE
1604 1605	CHCL3 ETHYL ACETATE	321 321		2.15 2.45	2.64 N 2.58	C6H6N2O2	N-NITROSOPHENYLHYDROXYL AMINE
1606	CCL4	320		3.36		C6H6N2O2	N-NITROSOPHENYLHYDROXYL AMINE
1607	N-BUTYL ACETATE	320		2.23	2.06	C6H6N2O2	N-NITROSOPHENYLHYDROXYLAMINE
1608	OCTANOL	217		0.55	0.55 = 0.85 A	C6H6N2O4S1 C6H6N2O4S1	M-NITROBENZENESUL FONAM IDE M-NITROBENZENESUL FONAM IDE
1609 1610	CHCL3 OCTANOL	217		-0.36 0.34	0.34 =	C6H6N2D4S1	O-NITROBENZENESUL FON AM I DE
1611	CHCL3	217		0.14	0.69 N	C6H6N2G4S1	O-NITROBENZENESULFONAMIDE
1612	OCTANOL	217		0.64	0.64 *	C6H6N2O4S1 C6H6N2O4S1	P-NITROBENZENESUL FONAMIDE P-NITROBENZENESUL FONAMIDE
1613 1614	CHCL3 DIETHYL ETHER	217		-0.60 -0.05	0.65 A 0.07 A	C6H6N2S1	PYRIDINE, 4-THIOCARBAMYL/1-NICOTINTHIOAMIDE/
1615	CHCL3	112		-0.41	-0.58 B	C6H6NZS1	PYRIDINE, 4-THIOCARBAMYL/I-NICOTINTHIOAMIDE/
1616	CHCL3	322		-0.33	~0.39 B	C6H6N451	METHYLTHIOPURINE
1617	OCTANOL	10		1.46	1.46 =	C6H6D1 C6H6D1	PHENOL PHENOL
1618 1619	OCTANOL DIETHYL ETHER	301 3		1.48 1.64	1.55 A	C6H601	PHENOL
1620	DIETHYL ETHER	323		1.58	1.50 A	C6H601	PHENOL
1621	CYCLOHEXANE	124		-1.00		C6H601	PHENOL
1622	CYCLOHEXANE	132 324		-0.72 -0.93		C6H6D1 C6H6D1	PHENOL PHENOL
1623 1624	CYCLOHEXANE CYCLOHEXANE	325		-0.77		C6H6O1	PHENOL
1625	CYCLOHEXANE	56		-0.81		C6H6O1	PHENOL
1626	CYCLOHEXANE	300		-1.00		CeHeD1	PHENOL PHENOL
1627	CHCL3	243 324		0.00	1.22 A 1.54 A	C6H6O1 C6H6O1	PHENOL
1628 1629	CHCL3 CHCL3	326		0.37	1.55 A	C6H601	PHENOL
1630	CHCL3	254		0.36	1.49 A	C6H6D1	PHENOL
1631	OILS	324		0.81	1.93 A	C6H6D1	PHENOL PHENOL
1632 1633	OILS OILS	173 224		0.78 0.60	1.96 A 1.76 A	C6H601 C6H601	PHENOL
1634	DIF2	327		0.75	1.87 A	C6H6D1	PHENOL
1635	BENZENE	35		0.36	1.76 A	C6H6D1	PHENOL
1636	BENZENE	324		0.34	1.70 A 1.77 A	C6H6D1 C6H6D1	PHENOL PHENOL
1637 1638	BENZENE BENZENE	328 329		0.41	1.76 A	C6H601	PHENOL
1639	BENZENE	330		0.37	1.73 A	C6H6O1	PHENOL
1640	8ENZENE	219		0.32	1.69 A	C6H601	PHENOL
1641 1642	BENZENE XAFENE	248 324		0.42	1.81 A 1.93 A	C6H6O1 C6H6O1	PH ENOL PHENOL
1643	XYLENE	42		0.18	1.97 A	C6H601	PHENOL
1644	TOLUENE	324		0.22	1.77 A	C6H601	PHENOL
1645	TOLUENE	328 42		0.32	1.86 A 1.75 A	C6H6O1 C6H6O1	PHENOL PHENOL
1646 1647	TOLUENE NITROBENZENE	324		0.95	1.66	CeHeDI	PHENOL
1648	NITROBENZENE	328		0.87	1.60	C6H6D1	PHENOL
1649	PRIM. PENTANOLS	182		1.21	1.14	C6H601	PHENOL
1650 1651	PRIM. PENTANOLS N-BUTYL ACETATE	324		1.50	1.55	C6H6D1 C6H6D1	PHENOL PHENOL
1652	CCL4	324		-0.42	1.55 A	C6H6D1	PHENOL
1653	CCL4	328		-0.50	1.40 A	C6H6D1	PHENOL
1654 1655	CCL4 Meth. Decandate	329 124		-0.36 1.21	1.55 A 1.65	C6H6D1 C6H6D1	PHENOL PHENOL
1656	DI-I-PR. ETHER	331		1.12	2002	C6H601	PHENOL
1657	N-HEPTANE	310		-0.92		C6H601	PHENOL
1658 1659	N-HEPTANE HEXANE	254 324		-0.82 -0.96		C6H6D1	PH ENOL PH ENOL
1660	HEXANOL	331		1.46		C6H6D1	PHENOL
1661	OLEYL ALCOHOL	124		1.23	1.78	C6H601	PHENOL
1662	OFEAF VFCOHOF	300 248		1.19	1.75	C6H601	PHENOL PHENOL
1663 1664	CS2 PARAFFINS	327		-0.26 -0.85		C6H6D1	PHENOL
1665	BROMOFORM	7		0.18		C6H601	PHENOL
1666	OCTANOL	10		0.80		C6H6D2	M-DIHYDROXYBENZENE/RESORCINOL/
1667 1668	OCTANOL DIETHYL ETHER	301 3		0.77	0.77 = 0.67 A	C6H6O2 C6H6O2	M-DIHYDROXYBENZENE/RESORCINOL/ M-DIHYDROXYBENZENE /RESORCINOL/
1669	DIETHYL ETFER	248		0.67	0.70 A		M-DIHYDROXYBENZENE/RESORCINOL/
1670	BENZENE	248		-2.11		C6H6D2	M-DIHY DROXYBENZENE/RESORCINOL/
1671	N-BUTYL ACETATE	331 248		0.32 -1.50	0.57	C6H6O2 C6H6O2	M-DIHYDROXYBENZENE /RESORCINOL/ M-DIHYDROXYBENZENE/RESORCINOL/
1672 1673	CLCH2CH2CL OCTANOL	56		0.88	0.88 =	C6H6O2	O-DIHYDROXYBENZENE/CATECHOL/
1674	OCTANOL	301		1.01	1.01 =	C6H6D2	O-DIHYDROXYBENZENE/CATECHOL/
1675	DIETHYL ETHER	3 332		1.04	1.03 A 0.87 A	C6H6OZ C6H6O2	O-DIHYDROXYBENZENE/CATECHOL/ O-DIHYDROXYBENZENE /CATECHOL/
1676 1677	DIETHYL ETHER DIETHYL ETHER	323		0.86 0.89	0.90 A		O-DIHY DROXY BENZENE / CATECHOL/
1678	BENZENE	248	12	-1.19	0.21 A	C6H6O2	O-DIHYDROXYBENZENE/CATECHOL/
1679	CL CH2CH2CL	248		-0.63		C6H6O2	O-DIHYDROXYBENZENE/CATECHOL/
1680 1681	DI-BUTYL ETHER DI-I-PR. ETHER	332 332		0.11	1.27	C6H6D2 C6H6D2	O-DIHYDROXYBENZENE /CATECHOL/ O-DIHYDROXYBENZENE /CATECHOL/
1682	CCTANGL	302		0.59	0.59 =		P-DIHY DROXY BENZENE/HYDROQUINDNE/
1683	DCTANOL	301		0.50	0.50 =	C6H6O2	P-DIHYDROXYBENZENE/HYDROQUINONE/
1684	DIETHYL ETHER	3 333		0.46	0.51 A 0.44 A	C6H6O2 C6H6O2	P-DIHYOROXYBENZENE /HYDROQUINDNE/ P-DIHYOROXYBENZENE/HYDROQUINDNE/
1685 1686	DIETHYL ETHER DIETHYL ETHER	334		0.36 0.37	0.44 A	C6H6O2	P-DIHYDROXYBENZENE /HYDROQUINONE/
1687	DIETHYL ETHER	248		0.38	0.44 A	C6H6D2	P-DIHYDROXYBENZENE/HYDROQUINONE/
1688	OILS	305		-0.83	-0.48 A	C6H6O2	P-DIHYDROXYBENZENE /HYDROQUINONE/
1689 1690	BENZENE CLCH2CH2CL	248 248		-2.16 -1.61		C6H6O2 C6H6O2	P-DIHY DROXY BEN ZENE / HYDROQUINONE / P-DIHY DROXY BEN ZENE / HYDROQUINONE /
1691	DI-I-PR. ETHER	335		-0.13	0.39	C6H602	P-DIHYDROXYBENZENE/HYDROQUINONE/
1692	CHCL3	336		-0.22		C6H6O3	2-FURALDEHYDE, HYDROXYMETHYL
1693 1694	BENZENE Ethyl acetate	336 336		-0.24 0.13	1.04 A 0.12	C6H6O3 C6H6O3	2-FURAL DEHYDE, HYDROXYMETHYL 2-FURAL DEHYDE, 5-HYDROXYMETHYL
1695	DIETHYL ETHER	3		0.23	0.32 A	C6H6O3	1, 2, 3-TRIHYDROXYBENZENE/PYROGALLOL/
1696	DIETHYL ETPER	248		0.09	0.19 A	C6H6O3	1,2,3-TRIHYDROXYBENZENE/PYROGALLOL/
1697 1698	DIETHYL ETHER DIETHYL ETHER	3 248		-0.35	-0.19 A -0.19 A	C6H6O3 C6H6O3	1,3,5-TRIHYDROXYBENZENE/PHLOROGLUCINOL/ 1,3,5-TRIHYDROXYBENZENE/PHLOROGLUCINOL/
1699	DIETHYL ETFER	3		-2.70	-2.25 A	C6H6O3S1	BENZENESULFONIC ACID
1700	DIETHYL ETPER	3		-0.30	-0.15 A	C6H6O6	ACONITIC ACID

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
1701	DIETHYL ETHER	207		-0.62	-0.43 A		ACONITIC ACID
1702 1703	I-BUTANOL ME-I-BUT.K ETONE	4 195		0.49	0.18 -0.24	C6H6O6 C6H6O6	ACONITIC ACID ACONITIC ACID
1704	OCTANOL	235		2.52	2.52 =	C6H6S1	THIOPHENOL
1705 1706	OCTANOL BENZENE	255 311	6	1.58 -0.80	1.58 =	C6H78102 C6H7B102	PHENYLBORONIC ACID PHENYLBORONIC ACID
1707	BENZENE	311	6	-2.92		C6H7B103	PHENYLBORONIC ACID, 4-HYDROXY
1708	BENZENE	311	6	-2.78 -2.65		C6H7B103 C6H7B2N106	PHENYLBORONIC ACID, 3-HYDROXY PHENYL, 1, 4-DIBORONIC ACID,, 2-NITRO
1709 1710	BENZENE OCTANOL	311 10	•	0.90	0.90 =	C6H7N1	AN IL INE
1711	OCTANOL	301		0.98	0.98 = 0.87 A	C6H7N1 C6H7N1	ANILINE ANILINE
1712 1713	DIETHYL ETHER CYCLOHEXANE	329 337		0.85 0.02	U+01 A	C6H7N1	ANILINE
1714	CHCL3	254		1.42	0.98 8	C6H7N1	ANILINE ANILINE
1715 1716	CHCL3 BENZENE	338 338	12	1.23	0.82 B	C6H7N1 C6H7N1	ANILINE
1717	BENZENE	72		1.00	1.24 B	C6H7N1	ANILINE
1718 1719	XYLENE TOLUENE	46 339		.0.18 0.89	0.75 B 1.30 B	C6H7N1 C6H7N1	ANILINE ANILINE
1720	CCL4	329		0.25	1.11 N	C6H7N1	ANILINE
1721 1722	CLCH2CH2CL N-HEPTANE	248 310		1.45 -0.03		C6H7NI C6H7NI	ANILINE ANILINE
1723	N-HEPTANE	254		0.04		C6H7N1	ANILINE
1724 1725	N-HEPTANE N-HEPTANE	338 340	44	-0.26 0.04		C6H7N1 C6H7N1	ANILINE ANILINE
1726	PARAFFINS	316		-0.12		C6H7N1	ANILINE
1727 1728	CHCL3	280 280		1.79 1.89	1.06 8	C6H7N1 C6H7N1	2-METHYL PYRIDINE/2-PICOLINE/ 3-METHYL PYRIDINE/3-PICOLINE/
1729	CHCL3	280		1.88		C6H7N1	4-METHYL PYRIDINE/4-PICOLINE/
1730 1731	OCTANOL OCTANOL	276 276		1.20	1.20 = 1.22 =	C6H7N1 C6H7N1	3-METHYLPYRIDINE /PKA = 5.68/ 4-METHYLPYRIDINE /PKA = 6.02/
1732	OCTANOL	10		0.17	0.17 =	C6H7N1O1	M-AMINOPHENOL
1733 1734	OCTANOL DIETHYL ETPER	301 248		0.15 0.11	0.15 ±	C6H7N101 C6H7N101	M-AMINOPHENOL M-AMINOPHENOL
1735	CYCLOHEXANE	314		-3.24		C6H7N101	M-AMINOPHENOL
1736 1737	BENZENE BENZENE	314 248		-1.36 -1.32	0.04 A	C6H7N101 C6H7N101	M-AMINOPHENOL M-AMINOPHENOL
1738	CCL4	314		-2.39	-0.19 A	C6H7N1 01	M-AMINOPHENOL
1739	CL CH2CH2CL	248 314		-0.58 -3.37		C6H7N101 C6H7N101	M-AMINOPHENOL M-AMINOPHENOL
1740 1741	N-HEPTANE HEXADECANE	314		-3.37		C6H7NLO1	M-AHINOPHENOL
1742	OCTANOL	56 301		0.62	0.62 = 0.52 =	C6H7N101 C6H7N101	O-AMINOPHENOL O-AMINOPHENOL
1743 1744	OCTANOL CYCLOHEXANE	314		-2.37		C6H7N101	O-AMINOPHENOL
1745	BENZENE	314 314		-0.84 -1.75	0.55 A 0.37 A	C6H7N101 C6H7N101	O-AMINOPHENOL O-AMINOPHENOL
1746 1747	CCL4 N-HEPTANE	314		-2.51	0437 A	C6H7N101	O-AMINOPHENOL
1748 1749	OCTANOL	301 314		0.04	0.04 ≖	C6H7N101 C6H7N101	P-AMINOPHENOL P-AMINOPHENOL
1750	CYCLOHEXANE BENZENE	314		-1.65	-0.24 A	C6H7N101	P-AMINOPHENOL
1751	CCL4	314 314		-2.64 -3.55	-0.39 A	C6H7N101 C6H7N101	P-AMINOPHENOL P-AMINOPHENOL
1752 1753	N-HEPTANE OCTANOL	217	07	0.31	0.31 =	C6H7N102S1	BENZENESUL FONAMIDE
1754	OCTANOL STEED	10 113		0.31 0.30	0.31 = 0.38 A	C6H7N102\$1 C6H7N102\$1	BENZENESUL FONAMIDE BENZENESUL FONAMIDE
1755 1756	DIETHYL ETHER CHCL3	113		-0.24	0.34 N	C6H7N1 02S1	BENZENESULFONAMICE
1757	CHCL3	217 113	07 16	-0.24 0.82	0.35 N 0.83 A	C6H7N102S1 C6H7N103S1	BENZENESULFONAMIDE N-HYDROXYBENZENESULFONAMIDE
1758 1759	OIETHYL ETHER CHCL3	113	16	-0.82	-0.16 N	C6H7N1O3S1	N-HYDROXYBENZ ENESUL FON AMIDE
1760	DCTANUL	276 322		-0.50 -1.05	-0.50 ±	C6H7N3Q1 C6H7N5	4-CARBAMYLAMINOPYRIDINE 6-METHYLAMINOPURINE
1761 1762	CHCL3	322		-0.95	-0.89 B	C6H7N5S1	2-AMINO-6-METHYLTHIOPURINE
1763	OCTANOL BENZENE	276 311	6	1.39	1.39 =	C6H701 C6H8B1N102	2-METHOXYPYRIDINE /PKA = 3.28/ PHENYLBORONIC ACID:3-AMINO
1764 1765	BENZENE BENZENE	311	6	-2.61		C6H8B2O4	PHENYL, 1, 4-DIBORONIC ACID
1766	OCTANOL	276 276		1.02	1.02 = 0.62 =	C6H8N1 C6H8N2	2-AMINO-5-METHYLPYRIDINE /PKA = 7.22/ 4.6-DIMETHYLPYRIMIDINE
1767 1768	DCTANOL CYCLOHEXANE	314		-2.44		C6H8N2	M-PHENYLENEDIAMINE
1769 1770	BENZENE BENZENE	71 314		-0.79 -0.77	0.00 B 0.02 B	C6H8N2 C6H8N2	M-PHENYLENEDIAMINE M-PHENYLENEDIAMINE
1771	BENZENE	72		-0.75	0.03 B	C6H8N2	M-PHENYLENEDIAMINE
1772 1773	BENZENE CCL4	248 314		-0.75 -2.49	0.03 B	C6H8N2 C6H8N2	M-PHENYLENEDIAMINE M-PHENYLENEDIAMINE
1774	N-REPTANE	314		-2.60		C6H8N2	M-PHENYLENEDIAMINE O-PHENYLENEDIAMINE
1775 1776	OCTANOL DIETHYL ETFER	301 248		0.15 -0.06	0.15 = 0.08 A	C6H8N2 C6H8N2	O-PHENYLENEDIAMINE
1777	CYCLOHEXANE	314		-1.65		C6H8N2 '	O-PHENYL ENEDIAMINE
1778 1779	CYCLOHEXANE BENZENE	248 71	43	-1.31 -0.28	0.35 B	C6H8N2 C6H8N2	O-PHENYL ENEDIAMINE O-PHENYL ENEDIAMINE
1780	BENZENE	314		-0.26	0.37 B	C6H8N2	O-PHENYLENEDIAMINE O-PHENYLENEDIAMINE
1781 1782	BENZENE Benzene	72 248		-0.26 -0.26	0.37 B	C6H8N2 C6H8N2	O-PHENYLENEDIAMINE
1783	CCL4	314		-0.81		C6H8N2	O-PHENYL ENED IAM INE O-PHENYL ENED IAM INE
1784 1785	CLCH2CH2CL . N-HEPTANE	248 314		0.44		C6H8N2 C6H8N2	O-PHENYLENEDIAMINE
1786	CYCLOHEXANE	314		-2.81	-0.26 8	C6H8N2 C6H8N2	P-PHENYL ENED I AM INE P-PHENYL ENED I AM INE
1787 1788	BENZENE BENZENE	71 314		-1.17 -1.17	-0.26 B	C6H8N2	P-PHENYL ENEDIAMINE
1789	CCL4	314 314		-1.78 -3.00		C6H8N2 C6H8N2	P-PHENYLENEDIAMINE P-PHENYLENEDIAMINE
1790 1791	N-HEPTANE OCTANOL	283		1.25	1.25 *	C6H8N2	PH ENYL HYDRAZ IN E
1792 1793	OCTANOL OCTANOL	341 217		-0.10 -0.83	-0.10 = -0.83 =	C6H8N2 C6H8N2O2S1	3-PYRIDYLMETHYLAMINE SULFANILAMIDE
1794	OCTANOL	186		-0.72	-0.72 =	C6H8N20251	SULFANILAMIDE
1795 1796	OIETHYL ETHER DIETHYL ETHER	342 113		-0.72 -0.85		C6H8N2O2S1 C6H8N2O2S1	SULFANILAMIDE SULFANILAMIDE
1797	CHCL3	343	2	-1.40	-0.70 N	C6H8N20251	SULFANILAMIDE SULFANILAMIDE
1798 1799	CHCL3	113 344		-1.63 -1.85	-1.07 N	C6H8N2O2S1 C6H8N2O2S1	SULFANILAMIDE
1800	CHCL3	254		-1.52	-0.79 N	C6H8N20251	SULFANILAMIDE

NO.	SOLVENT	REF F001	LOGP	LOGP	EMPIRICAL	NAME
.,,,,	3027277	NOTE		OCT	FORMULA	
1801	CHCL3	217 32	-1.69	-0.97 N	C6H8N2O2S1	SULFANILAMIDE
1802	BENZENE	343 2	-2.05	-0.64 A	C6H8N2G2S1	SULFANILAMIDE
1803	I-BUTANOL	130 12	-0.96	-1.85	C6H8N2O251	SULFANILAMIDE SULFANILAMIDE
1804 1805	I-PENT. ACETATE	343 2 343 2	-0.44 -2.52	-0.67 -0.29 A	C6H8N2D2S1 C6H8N2D2S1	SULFANILAMIDE
1806	CCL4 GILS	345	-1.18	0.16 A	C6H8N2O3	BARBITURIC ACID, DIMETHYL
1807	OILS	240	1.61	1.94 8	C6H8N2O8	ISOSORBIDE DINITRATE
1808	OILS	240	2.69	2.94 8	C6H8N6018	MANWITOL HEXANITRATE 1-HEXYN-5-ONE
1809 1810	OCTANOL OILS	346 347	0.58 0.49	0.58 * 1.70 A	C6H8O1	SORBIC ACID
1811	ME-I-BUT.KETONE	195	1.10	0.96	C6H802	SORBIC ACID
1812	S-PENTANOL 5	195	-0.30	-0.65	C6H8O6	PROPANE TRICARBOXYLIC ACID
1813	OLETHYL ETHER	3 207	-1.22 -1.30	-0.95 A -1.03 A	C6H8O6 C6H8O6	PROPANE TRICARBOXYLIC ACID PROPANE TRICARBOXYLIC ACID
1814 1815	DIETHYL ETHER ME-I-BUT.KETONE	195	-1.00	-0.93	C6H806	PROPANE TRICARBOXYLIC ACID
1816	OLEYL ALCOPOL	5	-1.52	+0.94	C6H8O6	PROPANE TRICARBOXYLIC ACID
1817	I-BUTANOL	4	0.01	-0.49 -1.72 =	C6H8O6 C6H8O7	PROPANETRICARBOXYLIC ACID CITRIC ACID
1818 1819	OCTANOL DIETHYL ETHER	5 3	-1.72 -2.06	-1.69 A	C6H807	CITRIC ACID
1820	DIETHYL ETHER	207	-2.18	~1.80 A	C6H807	CITRIC ACID
1821	DIETHYL ETHER	213		-1.79 A	C6H807	CITRIC ACID
1822	I-BUTANOL I-BUTANOL	4 184	-0.53 -0.62	-1.25 -1.38	C6H8O7 C6H8O7	CITRIC ACID CITRIC ACID
1823 1824	PRIM. PENTANOLS	48	-0.76	-1.27	C6H807	CITRIC ACID
1825	CYCLOHEXANONE	194	-0.67	-1.47	C6H807	CITRIC ACID
1826	2-BUTANONE	194	-0.48	-1.63	C4H807	CITRIC ACID CITRIC ACID
1827 1828	ME-I-BUT.KETONE S-PENTANOLS	195 195	-1.62 -1.16	-1.51 -1.63	C6H807 C6H807	CITRIC ACID
1829	OCTANOL	348	-0.70	-0.70 =	C6H9N102	N-FORMYLCYCLOBUTANECAR BO XAMIDE
1830	OILS	284	0.19	0.95 B	C6H9N301	1,3,5-TRIMETHYL-4-NITROSOPYRAZOLE Histidine
1831	SEC-BUTANOL OCTANE	84 19 256	-1.68 -1.26	-2.86	C6H9N3O2 C6H9N3O2	2-I-PROPYL-5-NITROIMIDAZOLE
1832 1833	OCTANOL	56	2.45	2.45 =	C6H10	I, S-HEXADI ENE
1834	CHCL3	265	-0.94	-0.28 N	C6H10N2O2	CYCLOHEXANEDIONE DIOXIME
1835	OCTANOL	206	3.75	3.75 = 1.22 =	C6H10N2G6S3 C6H10N4G1S1	IMIDAZOLE, 2, 4, 5-TRIMETHYLSULFONYL 3-MERCAPTO-4-AMINO-6-I-PR-1, 2, 4-TRIAZINE-5-ONE
1836 1837	OCTANOL OCTANOL	134 134	1.22	0.46 =	C6H10N40151	3-METHIO-4-AMINO-6-ETHYL-I,2,4-TRIAZINE-5-ONE
1838	OCTANOL	349	-0.24	-0.24 =	C6H10N601	IMIDAZOLE-4-CARBOXAMIDE, 5-(3,3-DIME-1-TRIAZENO)(45388)
1839	OCTANOL	65	0.81	0.81 *	C6H1001	CYCLOHEXANONE DIALLYL ETHER
1840 1841	OILS OCTANOL	258 255	0.30 1.02	0.69 B 1.02 ±	C6H10G1 C6H10G1	I-HEXEN-5-ONE
1842	50%ETHER+50%DMF	125	0.40	1.80	C6H1001	3-METHYL-1-PENTYN-3-OL/MEPARFYNOL/
1843	CCL4	350	1.42	1.24 B	C6H1001	I-PROPYLIDENE-ACETONE/MESITYL OXIDE/ 2.4-HEXANEDIONE/PROPIONYLACETONE/
1844 1845	CHCL3 DIETHYL ETHER	285 2	1.75 -0.35	2.81 A -0.19 A	C6H10O2 C6H10O2	2, 5-HEXAMEDIONE/ACETONYLACETONE/
1846	OILS	ž	-1.09	0.17 A	C6H1002	2,5-HEXANEDIONE/ACETONYLACETONE/
1847	OILS	173	0.04	1.23 A	C6H10U3	ETHYLAGETOACETATE
1848	OCTANOL	255 5	-0.13 0.08	-0.13 = 0.08 =	C6H10U3 C6H10U4	4-KETDVALERIC ACID, METHYL ESTER ADIPIC ACID
1849 1850	OCTANOL Diethyl ether	192	-0.29	-0.14 A	C6H1004	ADIPIC ACID
1851	DIETHYL ETHER	351	-0.29	-0.14 A	C6H10O4	ADIPIC ACID
1852	DIETHYL ETHER	194 194	-0.24	-0.09 A	C6H10O4 C6H10O4	ADIPIC ACID ADIPIC ACID
1853 1854	N-BUTANOL I-BUTANOL	4	0.44	0.09	C6H1004	ADIPIC ACID
1855	ETHYL ACETATE	194	0.08	0.05	C6H1004	ADIPIC ACID
1856	CYCLOHEXANDNE	194	0.49		C6H10G4	ADIPIC ACID
1857 1858	2-BUTANONE ME-I-BUT-KETONE	194 194	0.30	-0.06 -0.82	C6H10O4 C6H10O4	ADIPIC ACID ADIPIC ACID
1859	ME-1-BUT.KETONE	195	-0.11	-0.16	C6H1004	ADIPIC ACID
1860	S-PENTANOL S	195	0.48	0.24	C6H1004	ADIPIC ACID
1861 1862	DIETHYL ETHER 1-BUTANOL	3 4	0.30	0.38 A	C6H10O4 C6H10O4	ETHYLENE GLYCOL DIACETATE ETHYLENE GLYCOL DIACETATE
1863	OILS	352	0.30	1.46 A	C6H118R1N2O2	A-BROMO-A-METHYLBUTYRYLUREA
1864	OILS	264	0.28	1.44 A	C6H11BR1N2O2	A-BRONG-A-METHYLBUTYRYLUREA
1865	OILS	264 296	0.12	1.30 A 1.37 A	C6H11BR1N2O2 C6H11BR1N2O2	A-BROMO-I-VALERYLUREA A-BROMO-I-VALERYLUREA/BROMISOVALUM/
1866 1867	01F2	352	0.15 -0.36	0.87 A	C6H118R1N2O2	A-BROMOVAL ERYL UR EA
1868	OILS	264	-0.19	1.01 A	C6H11BR1N2O2	A-BROMOVALERYLUREA
	OILS	352 352	-0.45	0.78 A	C6H11BR1N2O2 C6H11BR1N2O2	B-BROMOVALERYLUREA G-Bromovalerylurea
	OILS OILS	352 352	-0.54 -0.07	1.13 A	C6H118R1N2O2	A-ETHYL-8-BROMOPROPIONYLUREA
1872	OILS	352	0.23	1.39 A	C6H118R1N2O2	A-METHYL-B-BROMOBUTRYLUREA
	OILS	352	-0.04		C6H118R1N2O2	A-METHYL-G-BRONOBUTYRYLUREA
	01F2 01F2	264 264	-0.11 0.02	1.09 A 1.21 A		A-CHLORO-I-VALERYLUREA A-IODO-I-VALERYLUREA
1876	I-OCTANOL	353	-2.60		C6H11K102	POTASSIUM HEXANOATE
1877	OCTANOL	260	-0.19	-0.19 =	C6H11N101	2-AZACYCLOHEPTANONE
	OCTANOL CYCLOHEXANE	80 354	1.09 -0.10	1.09 *	C6H11N1O2 C6H11N1O2	O-{1-ETHYL-ALLYL}CARBAMATE NITROCYCLOHEXANE
1880		67	-1.60		C6H11N103	A-AMINDBUTYRIC ACID,N-ACETYL(DL)
1881	ETHYL ACETATE	67	-0.84	-0.96	C6H11N1O3	A-AMINOBUTYRIC ACID, N-ACETYL(DL)
1882		260 56	0.75		C6H11N1S1	2-AZACYCLOHEPTANTHIONE HEXANOIC ACID. SODIUM SALT
1883 1884	OCTANOL I-OCTANOL	353	-2.17 -2.59	-6411 =	C6H11NA102 C6H11NA102	SODIUM HEXANDATE
1885	OILS	296	0.42	1.57 A	C6H12BR1N101	2-BROMO-2-ETHYLBUTYRAMIDE
1886	SCTANOL	227	0.29		C6H12BR2O4	1,6-DIBROMO-1,6-DIDEDXYGALACTITOL (104800)
1887 1888		227 216	0.24	0.24 = 0.04 =	C6H12BR2O4 C6H12N2O1	1,6-DIBROMO-1,6-DIDEOXYMANNITOL(94100) 1-(2-HYDROXYETHYL)-2-METHYLIMIDAZOLINE
1889	OILS	264	-0.31	0.91 A	C6H12NZO2	VALERYLUREA
1890	OIL:S	264	-0.16	1.04 A	C6H12N2O2	I-VALERYLUREA
1891	DILS Diethyl ether	2 2	-3.68 -3.58	-2.13 A -2.34 B	C6H12N4 C6H12N4	HEXAMETHYLENE TETRAMINE HEXAMETHYLENETETRAMINE
1893	I-BUTANOL	4	-1.17	-2.15	C6H12N4	HEXAMETHYLENETETRAMINE
1894	OCTANOL	186	1.23	1.23 =	C6H12O1	CYCLOHEXANOL
1895 1896		255 218	1.38	1.38 = 1.88 =	C6H1201 C6H1202	Z-HEXANDNE HEXANDIC ACID
1897	DCTANOL	218	1.92	1.92 #	C6H12O2	HEXANGIC ACID
1898	DIETHYL ETHER	190	1.86	1.76 A		HEXANGIC ACID
1899 1900		3 49	1.97 1.95		C6H12O2 C6H12O2	HEXANDIC ACID
2-00					· - · <del></del>	'

2000

NO.	SOLVENT	REF FOO		LOGP	EMPIRICAL FORMULA	NAME
2001	I-BUTANOL	4	2.02	2.34	C6H15N1	HEXYLAMINE
2002	XYLENE	46	0.89	1.52 B	C6H15N1	HE XYLAMINE
2003 2004	OCTANOL BENZENE	218 355	1.44	1.44 = 1.30 B	C6H15N1 C6H15N1	TRIETHYLAMINE TRIETHYLAMINE
2005	I-BUTANGL	4	1.32	1.47	C6H15N1	TRIETHYLAMINE
2006	XYLENE	46	1.11	1.77 B 1.37 B	C6H15N1 C6H15N1	TRIETHYLAMINE TRIETHYLAMINE
2007 2008	TOLUENE TOLUENE	68 66	0.76	1.20 B	C6H15N1	TR IETHYL AMINE
2009	TOLUENE	355	0.92	1.32 B	C6H15N1	TRIETHYLAMINE
2010 2011	PRIM. PENTANOLS DIETHYL ETHER	182 3	1.42 -0.46	1.42 0.46 B	C6H15N1 C6H15N1O1	TRIETHYLAMINE DIETHYLETHANDLAMINE
2012	I-BUTANOL	4	0.58	0.31	C6H15N101	DI ETHYL ETHANOL AM INE
2013	OCTANOL	5	-0.82	-0.82 =	C6H15N1O2	DI-I-PROPANOLAMINE DI-I-PROPANOLAMINE
2014 2015	DIETHYL ETHER I-BUTANOL	3 4	-2.23 -0.15	-1.10 B -0.72	C6H15N102 C6H15N102	DI-I-PROPANOLAMINE
2016	DIETHYL ETHER	š	-2.96	-1.75 B	C6H15N103	TRIETHANOLAMINE
2017	I-BUTANOL	4 135	-0.58 1.90	-1.32 1.67 B	C6H15N1O3 C6H15O2P1S2	TRIETHANDLAMINE PHOSPHORODITHIOTIC ACID, DI-I-PROPYL
2018 2019	CCL4 PRIM. PENTANOLS	236 17		0.62	C6H15O4P1	PHOSPHATE, DI-N-PROPYL
2020	OCTANOL	56	0.30	0.30 =	C6H16N2	ETHYLENEDIAMINE, N,N,N',N'-TETRAMETHYL SILANE, BUTYL-DIMETHYL
2021 2022	OCTANOL OCTANOL	298 298	3.57 3.84	3.57 = 3.84 =	C6H16SI1 C6H16SI1	SILANE, BUTYL-DIMETHYL SILANE, PROPYL-TRIMETHYL
2023	OCTANOL	56	0.28	0.28 =	C6H18N3O1P1	HEXAMETHYL PHOSPHORIC TRIAMIDE
2024	I-BUTANGL	4 206	-0.82 4.53	-1.66 4.53 =	C6H18N4 C7H1CL5N2	TRIETHYLENETETRAMINE BENZIMIDAZOLE, 2, 4, 5, 6, 7-PENTACHLORO
2025 2026	OCTANOL OCTANOL	206 27				4-PYRIDINE IMIDAZOLE, 2-TRIFLOROME-6, 7-DICL
2027	HEXANE	299	0.49		C7H3BR2N101	4-HYDROXY-3,5-DIBROMOBENZONITRILE 4-PYRIDINE IMIDAZOLE,2-TRIFLUOROME-6-CL
2028 2029	OCTANOL HEXANE	206 27 299	2.69 -0.14	2.69 =	C7H3CL1F3N3 C7H3CL2N101	4-HYDROXY-3, 5-DICHLOROBENZONITRILE
2030	HEXANE	299	1.08		C7H3 [2N101	4-HYDROXY-3, 5-DI IO DOBENZON ITRILE
2031	DIETHYL ETPER	46 173	0.27 2.61	0.36 A 3.56 A	C7H3N3O8 C7H4BR1NI	2,4,6-TRINITROBENZOIC ACID BROMOBENZONITRILE
2032 2033	DILS DCTANDL	206 27		1.23 =		4-PYRIDINE IMIDAZOLE, 2-TRIFLUOROMETHYL
2034	OCTANOL	206 27		0.94 =		5-PYRIDINE IMIDAZOLE, 2-TRIFLUOROMETHYL BENZENE, 3-CYANO-1-NITRO
2035 2036	OCTANOL OCTANOL	10 10	1.17		C7H4N2O2 C7H4N2O2	BENZENE, 4-CYANO-1-NITRO
2037	DIETHYL ETHER	46	1.18	1.16 A	C7H4N2O6	2,4-DINITROBENZOIC ACID
2038	CHCL 3	46	-0.88 -0.92	0.42 A 0.79 A	C7H4N2O6 C7H4N2O6	2,4-DINITROBENZOIC ACID 2,4-DINITROBENZOIC ACID
2039 2040	XYLENE CHCL3	46 149	0.18	1.38 A	C7H4N2D6	3.5-DINITROBENZOIC ACID
2041	CHCL3	46	0.07	1.28 A	C7H4N2O6	3,5-DINITROBENZOIC ACID
2042 2043	CHCL3 XYLENE	356 46	-0.20 0.09	1.04 A 1.90 A	C7H4N2O6 C7H4N2O6	3,5-DINITROBENZOIC ACID 3,5-DINITROBENZOIC ACID
2044	ME-I-BUT.K ETONE	149	2.48	2.22	C7H4N2D6	3,5-DINITROBENZOIC ACID
2045	GCTANOL	276	1.60 2.87	1.60 = 2.87 =	C7H4N4O4 C7H5BR1O2	5.7-DINITROBENZPYRAZOLE /PKA = 1.20/ M-BROMOBENZDIC ACIO
2046 2047	OCTANOL CHCL3	10 29	2.04	3.07 A	C7H5BR102	M-BROMOBENZOIC ACID
2048	CHCL3	29	0.91	2.05 A	C7H5BR102	O-BROMOBENZOIC ACIO
2049 2050	OCTANOL OCTANOL	10 218	2.86 2.46	2.86 = 2.46 =	C7H5BR102 C7H5CL1N201	P-BROMOBENZOIC ACIO BENZOXAZOLE,2-AMINO-5-CHLORO/ZOXAZOLAMINE/
2051	DCTANOL	10	2.68	2.68 =	C7H5CL102	M-CHLOROBENZOIC ACID
2052 2053	CHCL3 TOLUENE	29 12 29	1.92	3.05 A 2.56 A	C7H5CL102 C7H5CL102	M-CHLOROBENZOIC ACID M-CHLOROBENZOIC ACID
2054	OCTANOL	65	1.98	1.98 =	C7H5CL102	O-CHLOROBENZOIC ACID
2055	DIETHYL ETHER	46 357	2.14 -0.34	2.00 A	C7H5CL102 C7H5CL102	O-CHLOROBENZOIC ACID O-CHLOROBENZOIC ACID
2056 2057	CYCLOHEXANE CHCL3	29	0.90	2.03 A	C7H5CL102	O-CHLOROBENZOIC ACID
2058	XYLENE	46	0.01	1.80 A	C7H5CL102	O-CHLOROBENZOIC ACID
2059 2060	TOLUËNE OCTANOL	29 10	0.27 2.65	1.81 A 2.65 =	67H5CL102 67H5CL102	O-CHLOROBENZOIC ACID P-CHLOROBENZOIC ACID
2061	CHCL3	29	1.72	2.78 A	C7H5CL102	P-CHLOROBENZOIC ACID
	TOLUENE	29 235	1.26 2.92	2.68 A 2.92 =	C7H5CL102 C7H5CL3	P-CHLOROBENZOIC ACIO A, A, A-TRICHLOROTOLUENE
2063 2064	OCTANOL OCTANOL	10	2.15	2.15 =		M-FLUOROBENZOIC ACID
2065	OCTANOL	10	2.07	2.07 =	C7H5F102	P-FLUOROBENZOIC ACID
2066 2067	OCTANGL OCTANGL	56 217 01	2.79 1.73	2.79 = 1.73 =	C7H5F3 C7H5F3N2O4S1	BENZENE, TRIFLUOROMETHYL 3-TRICHLOROMETHYL-4-NITROBENZENESULFONAMIDE
	CHCL3	217 07	0.19	1.44 A	C7H5F3N2O4S1	3-TR1CHLOROMETHYL-4-NITROBENZENESULFONAMIDE
2069 2070	OCTANOL OCTANOL	56 10	3.17 2.95	3.17 = 2.95 =	C7H5F301 C7H5F301	BENZENE, TRIFLUOROMETHOXY M-TRIFLUOROMETHYLPHENOL
2071	OCTANDL	261	2.80	2.80 =	C7H5F3O1	O-TRIFLUOROMETHYLPHENOL
2072 2073		56 56	2.71 3.79	2.71 = 3.79 =		SULFONE, PHENYL-TRIFLUOROMETHYL BENZENE, TRIFLUOROMETHYLTHIO
2074	OCTANOL	10	3.13	3.13 =	C7H5[102	M-IDDBBENZOIC ACID
2075	OCTANOL	65	2.40	2.40 =		O-IODOBENZOIC ACID
	DIETHYL ETHER CHCL3	46 46	3.11 1.09	2.85 A 2.21 A		O-IODOBENZOIC ACID O-IODOBENZOIC ACID
2078	XYLENE	46	0.49	2.32 A	C7H5I102	O-IODOBENZOIC ACID
	OCTANOL OCTANOL	10 10	3.02 1.56		C7H5I102 C7H5N1	P-IOOOBENZOIC ACID BENZONITRILE
	CYCLOHEXANE	358	1.06		C7H5N1	BENZONITRILE
	OCTANOL	309	1.59		C7H5N101	BENZOXAZOLE
2083	OCTANOL OCTANOL	10 10	1.70 1.60		C7H5N101 C7H5N101	M-CYANOPHENOL P-CYANOPHENOL
2085	DIETHYL ETHER	112	1.79	1.68 A	C7H5N101S1	BENZOXAZOLTHION
2086 2087		65 359 16	0.91 0.64		C7H5N103S1 C7H5N103S1	SACCHARIN SACCHARIN
2088	DIETHYL ETFER	113 16	0.60	0.64 A	C7H5N1O3S1	SACCHARIN
2089 2090	CHCL3 I-PENT. ACETATE	113 16 359 12		1.17 A 1.39	C7H5N103S1 C7H5N103S1	SACCHARIN SACCHARIN
2091	OCTANOL	10	1.83	1.83 =	C7H5N104	M-NITROBENZOIC ACID
2092		46	1.97 0.48	1.85 A		M-NITROBENZOIC ACIO M-NITROBENZOIC ACIO
2093 2094		29 254	0.41	1.66 A 1.55 A		M-NITROBENZOIC ACID
2095	BENZENE	356	0.21	1.58 A	C7H5N1O4	M-NITROBENZOIC ACID
2096 2097	XYLENE TOLUENE	46 29	0.02			M-NITROBENZOIC ACID M-NITROBENZOIC ACID
2098	N-HEPTANE	254	-1.22		C7H5N1O4	M-NITROBENZOIC ACID
2099 2100	DIETHYL ETHER CYCLOHEXANE	46 357	1.59 -0.88	1.52 A	C7H5N104 C7H5N104	O-NITROBENZOIC ACID O-NITROBENZOIC ACID

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
2101	CHCL3	29		0.03	1.25 A	C7H5N104	O-NITROBENZOIC ACID
2102	CHCL3	46		-0.19	1.04 A	C7H5N104	O-NITROBENZOIC ACIO
2103	BENZENE	307		-0.30	1.12 A 1.16 A	C7H5N104 C7H5N104	O-NITROBENZOIC ACID O-NITROBENZOIC ACID
2104 2105	BENZENE XYLENE	356 46		-0.21 -0.35	1.31 A	C7H5N104	O-NITROBENZOIC ACID
2106	TOLUENE	29		-0.32	1.30 A	C7H5N104	O-NITROBENZOIC ACID
21C7 2108	OCTANOL CHCL3	10 29		1.89	1.89 = 2.00 A	C7H5N1O4 C7H5N1O4	P-NITROBENZOIC ACID P-NITROBENZOIC ACID
2109	BENZENE	307		0.31	1.67 A	C7H5N104	P-NITROBENZOIC ACID
2110	XYLENE	46		0.07 0.51	1.85 A 2.03 A	C7H5N1O4 C7H5N1O4	P-NITROBENZOIC ACID P-NITROBENZOIC ACID
2111 2112	TOLUENE OCTANOL	29 186		2.01	2.01 =	C7H5N1S1	BENZOTHIAZOLE
2113	OCTANDL	309		2.03		C7H5N1S1	BENZOTHIAZOLE
2114	OCTANOL OCTANOL	218 238		3.28 3.22		C7H5N1S1 C7H5N1S1	PHENYL ISOTHIOCYANATE PHENYL ISOTHIOCYANATE
2116	OCTANOL	206		1.64	1.64 =	C7H5N3O2	BENZIMIDAZOLE, 5-NITRO
2117	OCTANOL	216 292	78	-0.85 -0.97		C7H5NA103 C7H5NA103	SODIUM SALICYLATE SODIUM SALICYLATE
2119	OILS BENZENE	311	6	0.35	****	C7H681F302	PHENYL BORONIC ACID, 3-TRIFLUOROME THYL
2120	BENZENE	311 206	6	-1.71 2.39	2 30 =	C7H6B1N1O6 C7H6CL1N3S1	PHENYLBORONIC ACID, 3-NITRO, 4-CARBOXYL 4-PYRIDINE IMIDAZOLE, 2-METHYLTHIO-6-CHLORO
2121	OCTANOL OCTANOL	216		1.82	1.82 =	C7H6N2	7-AZAINOOLE
2123	OCTANOL	218		1.34	1.34 =		BENZIMIDAZOLE BENZIMIDAZOLE
2124 2125	OCTANOL OCTANOL	206 360		1.50	1.20 =	C7H6N2 C7H6N2	BENZ IN I DAZOL E
2126	DIETHYL ETHER	112		-0.02	0.82 8	C7H6N2	BENZIMIDAZOLE
2127	CHCL3	112	50	-0.10 1.82	1.12 A 1.82 =		BENZIMIDAZOLE INDAZOLE
2128 2129	OCTANOL OCTANOL	309 217	07	0.23		C7H6N202S1	P-CYANOBENZENESUL FONAMI DE
2130	CHCL3	217	07	-0.61		C7H6N2O2S1	P-CYANOBENZENESUL FONAM IDE BENZAL DEHYDE
2131 2132	OCTANOL DIETHYL ETHER	235 248	50	1.48 1.74	1.48 = 2.41 B	C7H601 C7H601	BENZAL DEHYDE
2133	CYCLOHEXANE	141	-	1.13		C7H601	BENZAL DEHYDE
2134 2135	CYCLOHEXANE BENZENE	248 248	50	1.34 2.10	2.00 B	C7H601 C7H601	BENZAL DEHYDE BENZAL DEHYDE
2136	CLCHZCHZCL	248	,,	2.35		C7H601	BENZAL DEHYDE
2137	OCTANOL STUES	10		1.87 1.89	1.87 = 1.78 A		BENZOIC ACID BENZOIC ACID
2138 2139	DIETHYL ETHER DIETHYL ETHER	46		1.78	1.68 A	C7H602	BENZOIC ACID
2140	DIETHYL ETHER	36		1.85		C7H6O2	BENZOIC ACID BENZOIC ACID
2141 2142	CHCL3	29 39		0.71		C7H602 C7H602	BENZOIC ACID
2143	CHCL 3	254		0.46	1.60 A	C7H602	BENZOIC ACID
2144 2145	CHCL3 GILS	17 361		0.54 0.66		C7H6O2 C7H6O2	BENZOIC ACID BENZOIC ACID
2146	OILS	362		0.54	1.71 A	C7H6D2	BENZOIC ACID
2147	BENZENE	29 39		0.21 0.24	1.58 A 1.61 A	C7H6O2 C7H6O2	BENZOIC ACID BENZOIC ACID
2148 2149	BENZENE BENZENE	38		0.18	1.55 A	C7H602	BENZOIC ACID
2150	BENZENE	3 6 3 3 6	12	-0.21 0.36	1.17 A	C7H602 C7H602	BENZOIC ACID BENZOIC ACID
2151 2152	BENZENE BENZENE	20		0.12	1.49 A	C7H602	BENZOIC ACID
2153	I-BUTANOL	4		1.69	1.87	C7H602 C7H602	BENZOIC ACID BENZOIC ACID
2154 2155	XYLENE XYLENE	46 36	12	0.44		C7H6O2	BENZGIC ACID
2156	TOLUENE	29		0.36	1.90 A	C7H6O2 C7H6O2	BENZOIC ACID BENZOIC ACID
2157 2158	TOLUENE CCL4	36 364	12	0.48 -2.90	2.00 A	C7H6O2	BENZOIC ACID
2159	ETHYL BENZOATE	17	_	1.50		C7H6O2	BENZOIC ACID
2160 2161	DI-PENTYL ETHER N-HEPTANE	17 254		0.95 -0.72		C7H6O2 C7H6O2	BENZOIC ACID BENZOIC ACID
2162	PARAFFINS	291		-0.12		C7H6O2	BENZOIC ACID
2163 2164	DIETHYL ETHER BENZENE	248 248		1.32	1.27 A	C7H602 C7H602	M-HYDROXYBENZALDEHYDE M-HYDROXYBENZALDEHYDE
2165	CL CH2CH2CL	248		0.44		C7H6O2	M-HYDROXYBENZALDEHYDE
2166	OCTANGL OCTANGL	365	32	1.70	1.70 =	C7H602 C7H602	O-HYDROXYBENZALDEHYDE/SALICYLALDEHYDE/ O-HYDROXYBENZALDEHYDE/SALICYLALDEHYDE/
2168	TOLUENE	150	"	2.15	2.70 B	C7H602	O-HYDROXYBENZALDEHYDE/SALICYLALDEHYDE/
2169	DIETHYL ETHER	366		1.10	1.08 A 1.11 A	C7H6O2 C7H6O2	P-HYDROXYBENZALDEHYDE P-HYDROXYBENZALDEHYDE
2170 · 2171	CHCL3 BENZENE	366 366		-0.12 -0.55	0.87 A		P-HYDROXYBENZAL DEHYDE
2172	CCL4	366		-1.70		C7H602	P-HYDROXYBENZALDEHYDE P-HYDROXYBENZALDEHYDE
2173		366 248		0.11		C7H602 C7H602	P-HYDROXYBENZAL DEHYDE
2175	DI-I-PR. ETHER	366		0.84	1.51	C7H6O2	P-HYDROXYBENZALDEHYDE
	OCTANOL CHCL3	9 367	12	0.53 1.70	0.53 = 1.21 B	C7H6O2 C7H6O2	TROPOLONE TROPOLONE
2178	OCTANOL	10		1.50	1.50 =	C7H6O3	M-HYDROXYBENZOIC ACID
2179		3		1.32	1.27 A 1.47	C7H6O3 C7H6O3	M-HYDROXYBENZOIC ACID M-HYDROXYBENZOIC ACID
2180 2181	I-BUTANOL OCTANOL	186		2.26	2.26 =	C7H6O3	O-HYDROXYBENZOIC ACID/SALICYLIC ACID/
2182 2183	OCTANOL DIETHYL ETHER	218		2.21 2.37	2.21 =	C7H6O3 C7H6O3	O-HYDROXYBENZOIC ACID/SALICYLIC ACID/ O-HYDROXYBENZOIC ACID/SALICYLIC ACID/
2184	DIETHYL ETHER	46		2.53		C7H603	O-HYDROXYBENZOIC ACID/SALICYLIC ACID/
2185	CYCLOHEXANE	15 357		-1.02 -0.50		C7H6O3 C7H6O3	D-HYDROXYBENZOIC ACID/SALICYLIC ACID/ D-HYDROXYBENZOIC ACID/SALICYLIC ACID/
2186	CYCLOHEXANE CHCL3	149		0.48		C7H6O3	O-HYDROXYBENZOIC ACID/SALICYLIC ACID/
2188	CHCL3	29 39	12	0.50		C7H6O3 C7H6O3	O-HYDROXYBENZOIC ACID/SALICYLIC ACID/ O-HYDROXYBENZOIC ACID/SALICYLIC ACID/
2189 2190	CHCL3	254	12	0.34 0.46	1.60 A	C7H6O3	D-HYDROXYBENZOIC ACID/SALICYLIC ACID/
2191	OILS	173		1.00	2.10 A	C7H6O3	O-HYDROXYBENZOIC ACID/SALICYLIC ACID/ O-HYDROXYBENZOIC ACID/SALICYLIC ACID/
2192 2193	BENZENE BENZENE	39 368	68	0.45 0.38		C7H6O3 C7H6O3	O-HYDROXYBENZOIC ACID/SALICYLIC ACID/
2194	I-BUTANGE	4		2.13	2.31	C7H603	O-HYDROXYBENZOIC ACID/SALICYLIC ACID/ O-HYDROXYBENZOIC ACID/SALICYLIC ACID/
2195 2196	XYLENE TOLUENE	46 29		0.11	1.93 A	C7H6O3 C7H6O3	O-HYDROXYBENZOIC ACID/SALICYLIC ACID/
2197	CCL4	17		-0.30		C7H603	O-HYDROXYBENZOIC ACID/SALICYLIC ACID/ O-HYDROXYBENZOIC ACID/SALICYLIC ACID/
2198 2199	ETHYL BENZOATE N-HEPTANE	17 254		1.90 -0.92	,	C7H6O3 C7H6O3	O-HYDROXYBENZOIC ACID/SALICYLIC ACID/
2200	ME-I-BUT.KETONE	149		2.51	2.25	C7H6D3	O-HYDROXYBENZOIC ACID/SALICYLIC ACID/

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
2201	OCTANOL	10 3		1.58 1.42	1.58 = 1.36 A	C7H6O3 C7H6O3	P-HYDROXYBENZOIC ACID P-HYDROXYBENZOIC ACID
2202	DIETHYL ETHER DIETHYL ETHER	46		1.00	1.00 A	C7H6O3	P-HYDROXYBENZOIC ACID P-HYDROXYBENZOIC ACID
2204 2205	OILS_	254 369	12	-2.00 0.22	-0.59 A	C7H603 C7H603	P-HYDROXYBENZOIC ACID
2206 2207	I-BUTANOL ETHYL BENZOATE	17		1.43 0.75	1.51	C7H603 C7H603	P-HYDROXYBENZOIC ACID P-HYDROXYBENZOIC ACID
2208 2209	DI-PENTYL ETHER XYLENE	17 46	12	-0.39 -1.66	-0.02 A	C7H6O3 C7H6O4	P-HYDROXY8ENZOIC ACID/ 2,4-DIHYDROXYBENZOIC ACID/RESORCYLIC ACID/
2210	ME-I-BUT-KETONE DIETHYL ETHER	195		1.55	1.44 1.31 A	C7H6D4 C7H6D4	2,4-DIHYDRDXYBENZOIC ACID /RESORCYLIG ACID/ 2,5-DIHYDRDXYBENZOIC ACID/GENTISIC ACID/
2212	CHCL3	46		-1.57	-0.21 A	C7H604 C7H604	2,5-DIHYDROXYBENZOIC ACID/GENTISIC ACID/ 2,5-DIHYDROXYBENZOIC ACID/GENTISIC ACID/
	XYLENE OCTANOL	46 56		-1.82 2.20	2.20 =	C7H6O4	2,6-DIHYDROXYBENZOIC ACID
2215 2216	DIETHYL ETHER Diethyl ether	46 3		1.45 -0.30	1.39 A -0.15 A	C7H604 C7H605	3,5-DIHYDROXYBENZOIC ACID 3,4,5-TRIHYDROXYBENZOIC ACID/GALLIC ACID/
2217 2218	DIETHYL ETHER	46 207		-0.42 -1.56	-0.25 A	C7H6O5 C7H6O6\$1	3,4,5-TRIHYDROXYBENZOIC ACID/GALLIC ACID/ SULFOSALICYLIC ACID/3-CD2H-4-OH-BENZENESULFONIC ACID/
2219 2220	ME-I-BUT.KETONE S-PENTANOLS	195 195		-1.25 -1.08	-1.17 -1.54	C7H6O6S1 C7H6O6S1	SULFOSALICYLIC ACID/3-CO2H-4-OH-BENZENESULFONIC ACID/ SULFOSALICYLIC ACID/3-CO2H-4-OH-BENZENESULFONIC ACID/
2221	BENZENE BENZENE	311 311	6	-1.46 -2.52		C7H7B1O3 C7H7B1O4	P-FORMYLPHENYLBORONIC ACID M-CARBOXYPHENYLBORONIC ACID
2223	BENZÉNE	311	6	-1.83	2.92 =	C7H7B104 C7H7BR1	P-CARBOXYPHENYLBORONIC ACID A-BROMOTOLUENE
2224 2225	OCTANOL OCTANOL	218 302		2.92	2.30 =	C7H7CL1	A-CHLOROTOL UENE
2226 2227	OCTANOL OCTANOL	301 301		3.28 3.42	3.28 = 3.42 =	C7H7CL1 C7H7CL1	M-CHLOROTOLUENE O-CHLOROTOLUENE
2228 2229	DCTANOL DCTANOL	301 206		3.33 3.70	3.33 × 3.70 ×	C7H7CL1 C7H7CL1N4O4S2	P-CHLOROTOLUENE PURINE, 2,6-DI-(METHYLSULFONYL)-8-CHLORO
2230 2231	OCTANOL OCTANOL	206 10		0.63 1.94	0.63 = 1.94 =	C7H7CL1N4S2 C7H7CL101	PURINE,2,8-DIMETHYLTHIO,6-CHLORO M-CHLOROBENZYL ALCOHOL
2232	OCTANOL OCTANOL	10 261		1.96	1.96 = 3.10 =	C7H7CL101 C7H7CL101	P-CHLOROBENZYL ALCOHOL PHENOL,4-CHLORO,3-METHYL
2234	CYCLOHEXANE	124		0.15	3.14	C7H7CL101 C7H7CL101	PHENOL, 4-CHLORO, 3-METHYL PHENOL, 4-CHLORO, 3-METHYL
2235 2236	METH. DECANDATE OLEYL ALCOHOL	124		2.46	3.00	C7H7CL101	PHENOL, 4-CHLORO, 3-METHYL
2237 2238	OCTANOL I-OCTANOL	65 353		2.74 -2.83	2.74 =	C7H7F102S1 C7H7K102	P-FLUGROSULFONYLTOLUENE POTASSIUM GUAICOLATE
2239 2240	OCTANOL OCTANOL	235 10		1.75	1.75 = 0.64 =	C7H7N101 C7H7N101	BENZAL DOXIME BENZAMIDE
2241 2242	DIETHYL ETHER CHCL3	248 248		-0.22 0.11	0.65 B	C7H7N1O1 C7H7N1O1	BENZAMIDE Benzamide
2243 2244	OILS	173 82		-0.51 -0.36	0.73 A 0.87 A	C7H7N101 C7H7N101	BENZAMIDE BENZAMIDE
2245	OILS	293		-0.66	0.59 A	C7H7N1O1	BENZAM I DE BENZAM I DE
2246 2247	OILS	249 70		-0.42	0.81 A 0.89 A	C7H7N1 01 C7H7N1 01	BENZAMIDE
2248 2249	BENZENE CCL4	248 248		-0.71 -1.54	0.68 A	C7H7N101 C7H7N101	BENZAMIDE BENZAMIDE
2250 2251	CLCH2CH2CL OLEYL ALCOHOL	248 82		0.00	C. 96	C7H7N101 C7H7N101	BENZAMIOE Benzamide
2252 2253	OCTANOL DIETHYL ETHER	56 3		1.15 0.18	1.15 = 0.27 A	C7H7N1O1 C7H7N1O2	FORMANILIDE M-AMINOBENZOIC ACID
2254 2255	I-BUTANOL OCTANOL	56		0.46	0.14 1.21 =	C7H7N102 C7H7N102	M-AMINOBENZOIC ACID D-AMINOBENZOIC ACID/ANTHRANILIC ACID/
2256	DIETHYL ETHER	3	•	1.43		C7H7N1D2 C7H7N1D2	O-AMINOBENZOIC ACID/ANTHRANILIC ACID/ O-AMINOBENZOIC ACID/ANTHRANILIC ACID/
2257 2258	DIETHYL ETHER	112	12	0.05	0.17 A	C7H7N102	O-AMINOBENZOIC ACID/ANTHRANILIC ACID/
2259 2260	CHCL3	112	25	0.57 -1.15	1.73 A 0.27 A	C7H7N102 C7H7N102	O-AMINOBENZOIC ACID/ANTHRANILIC ACID/ O-AMINOBENZOIC ACID/ANTHRANILIC ACID/
2261 2262	BENZENE I-BUTANOL	72 4		-0.27 1.18	1.11 A 1.15	C7H7N1O2 C7H7N1O2	O-AMINOBENZOIC ACID/ANTHRANILIC ACID/ O-AMINOBENZOIC ACID/ANTHRANILIC ACID/
2263 2264	OCTANOL DIETHYL ETHER	65 3		0.68 0.88		C7H7N1O2 C7H7N1O2	P-AMINOBENZOIC ACIO P-AMINOBENZOIC ACIO
2265 2266	I-BUTANOL OCTANOL	4 186		0.89 1.28	0.75 1.28 =	C7H7N1O2 C7H7N1O2	P-AMINOBENZOIC ACIO O-HYDROXYBENZAMIDE/SALICYLAMIDE/
2267 2268	OILS OILS	173		0.45	1.60 A		O-HYOROXYBENZAMIDE/SALICYLAMIDE/ O-HYDROXYBENZAMIDE/SALICYLAMIDE/
2269	OILS	82	:	0.41	1.56 A	C7H7N1 02	O-HYOROXYBENZAMIDE/SALICYLAMIDE/
2271	OILS	293 70	12	0.34	1.50 A 2.23 A	C7H7N1 02 C7H7N1 02	O-HYDROXYBENZAMIDE/SALICYLAMIDE/ O-HYDROXYBENZAMIDE/SALICYLAMIDE/
2272 2273	OLEYL ALCOHOL CHCL3	82 318		0.77 2.01	1.33 1.49 B	C7H7N1 02 C7H7N1 02	O-HYDROXYBENZAMIDE /SALICYLAMIDE/ I-NICOTINIC ACID, METHYL ESTER
2274 2275	OCTANDL OCTANOL	10 301		2.45 2.40	2.45 = 2.40 =	C7H7N102 C7H7N102	M-NITROTOLUENE M-NITROTOLUENE
2276 2277	DCTANDL	301 10		2.30 2.37	2.30 = 2.37 =	C7H7N1 02 C7H7N1 02	O-NITROTOLUENE P-NITROTOLUENE
2278 2279		301 56		2.42 1.08	2.42 =	C7H7N1O2 C7H7N1O2	P-NITROTOLUENE O-PHENYL CARBAMATE
2280		370 10	14	-1.04		C7H7N103 C7H7N103	P-AMINOSALICYLIC ACID M-NITROANISOLE
	DCTANOL	10		2.16	2.03 =	C7H7N1O3	P-NITROANI SOLE
2284		10		1.21		C7H7N1O3 C7H7N1O3	M-NITROBENZYL ALCOHOL P-NITROBENZYL ALCOHOL
2286	I-OCTANOL OCTANOL	353 10		-2.62 2.69	2.69 =		SODIUM GUAICOLATE TOLUENE
2287 2288		56 309		2.73 2.11	2.73 = 2.11 =		TOLUENE Toluene
2289 2290	OCTANOL	301 310		2.80	2.80 =	C7H8 C7H8	TOLUENE Toluene
2291	OCTANOL	218		-0.07 0.51	-0.07 = 0.91 B	C7H8CL1N3O4S2 C7H8N2O1	HYDROCHLOROTHIAZIDE P-NITROSOMETHYLANILINE
2293 2294		56 235		0.83	0.83 = 0.82 =	C7H8N2O1	PHENYLUREA PHENYLUREA
2295 2296	DIETHYL ETHER DIETHYL ETHER	3 113		0.04		C7H8N2O1 C7H8N2O1	PHENYLUREA PHENYLUREA
2297	CHCL3	113	12	-0.72	-0.07 N	C7H8N2O1	PHENYL UREA PHENYL THIOUREA
2298	DIETHYL. ETHER	235 248		0.73	0.32 A	C7H8N2S1 C7H8N2S1	PHENYL THIOUREA
2300	CHCL 3	248		0.54	1.10 N	C7H8N2S1	PHENYLTHIOUREA

NO.	SOLVENT	REF FOO'		LOGP OCT	EMPIRICAL FORMULA	NAME
2301	OCTANOL	226	1.04	1.04 =	C7H8N401S1	5-HYDROXYPICOLINALDEHYDE THIOSEMICARBAZONE(107392)
2302	OCTANOL	65	1.04	1.04 =	C7H8N40151	5-HYDROXYPICOL INAL DE HYDE THIOSEMICARBAZONE (107392)
2303 2304	OCTANOL CHCL3	218 254	-0.78 -0.40	-0.78 = -0.45 B	C7H8N402 C7H8N402	THEOBROMINE/3,7-DIMETHYLXANTHINE/ THEOBROMINE/3,7-DIMETHYLXANTHINE/
2305	CHCL3	322	-0.91	-0.85 8	C7H8N402	THEOBROMINE/3,7-DIMETHYLXANTHINE/
2306	OILS	371 12	0.19	1.36 A	C7H8N402	THEOBROWINE/3, 7-DIMETHYL XANTHINE/
2307	OCTANOL	218 254	-0.02 -0.52	-0.02 = -0.54 B	C7H8N402 C7H8N402	THEOPHYLLINE/1,3-DIMETHYLXANTHINE/ THEOPHYLLINE/1,3-DIMETHYLXANTHINE/
2308 2309	CHCL3	322 12		-0.80 B	C7H8N402	THEOPHYLLINE/1, 3-DIMETHYLXANTHINE/
2310	OILS	371 12	0.21	0.46 B	C7H8N402	THEOPHYLLINE/1,3-DIMETHYLXANTHINE/
2311	CCL4	234 12 254	-2.70 -1.70		C7H8N4O2 C7H8N4O2	THEOPHYLLINE/1,3-DIMETHYLXANTHINE/ THEOPHYLLINE/1,3-DIMETHYLXANTHINE/
2312 2313	N-HEPTANE OCTANGL	10	2.11	2.11 *	C7H801	ANISOLE
2314	OCTANOL	309	2.04	2.04 =		ANISOLE
2315	DIETHYL ETHER	323 50	2.46	2.27 A	C7H801 C7H801	AN ISOL E AN ISOL E
2316 2317	CYCLOHEXANE OCTANOL	358 10	2.30 1.10	1.10 =	C7H801	BENZYL ALCOHOL
2318	CYCLOHEXANE	141	-0.62		C7H801	BENZYL ALCOHOL
2319	HEXANE	372	-0.76 1.96	1.96 =	C7H801 C7H801	BENZYL ALCOHOL M-METHYLPHENOL/CRESOL/
2320 2321	OCTANOL OCTANOL	10 301	2.01	2.01 =	C7H801	M-METHYL PHENOL /CRESOL /
2322	DIETHYL ETPER	329	1.80	1.70 A	C7H801	M-METHYL PHENOL /CRESOL /
2323	CYCLOHEXANE	124	-0.30 -0.15		C7H801 C7H801	M-METHYLPHENOL/CRESOL/ M-METHYLPHENOL/CRESOL/
2324 2325	CYCLOHEXANE CYCLOHEXANE	132 325	-0.20		C7H801	M-METHYL PHENOL /CRESDL/
2326	CYCLOHEXANE	1.33	-0.10		C7H801	M-METHYLPHENOL/CRESOL/
2327	OILS	324 327	1.29 1.21	2.37 A 2.28 A	C7H801 C7H801	M-METHYLPHENOL/CRESOL/ M-METHYLPHENOL/CRESOL/
2328 2329	OILS BENZENE	324 45	0.88	2.24 A	C7H801	M-METHYLPHENOL/CRESOL/
2330	N-BUTYL ACETATE	331	2.19	1.98	C7H801	M-METHYLPHENOL/CRESOL/
2331 2332	METH. DECANDATE N-HEPTANE	124 310	1.83 -0.35	2.29	C7H801 C7H801	M-METHYLPHENOL/CRESOL/ M-METHYLPHENOL/CRESOL/
2333	DLEYL ALCOHOL	124	1.79	2.34	C7H801	M-METHYLPHENOL/CRESOL/
2334	PARAFFINS	327	-0.51	- 05	C7H8D1	M-METHYLPHENOL/CRESOL/ O-METHYLPHENOL
2335 2336	OCTANOL CYCLOHEXANE	216 124	1.95 0.04	1.95 =	C7H8D1 C7H8O1	O-METHYLPHENOL
2337	CYCLOHEXANE	132	0.13		C7H801	O-METHYL PHENOL
2338	CYCLOHEXANE	325	0.10		C7H801	O-METHYLPHENOL O-METHYLPHENOL
2339 2340	CYCLOHEXANE OILS	133 327	0.20 1.34	2.49 A	C7H801 C7H801	O-METHYL PHENOL
2341	N-BUTYL ACETATE	331	2.20	1.98	C7H801	O-METHYL PHENOL
2342	METH. DECANDATE	124 310	1.93 -0.05	2.40	C7H801 C7H801	O-METHYLPHENOL O-METHYLPHENOL
2343 2344	N-HEPTANE OLEYL ALCOHOL	124	1.81	2.36	C7H801	O-METHYL PHENOL
2345	PARAFFINS	327	-0.14		C7H801	O-METHYLPHENOL P-METHYLPHENOL
2346 2347	OCTANOL OCTANOL	10 301	1.94 1.92	1.94 = 1.92 =	C7H801 C7H801	P-METHYL PHENOL
2348	CYCLOHEXANE	132	-0.10		C7H801	P-METHYLPHENOL
2349 2350	CYCLOHEXANE GILS	325 327	-0.19 1.21	2.28 A	C7H801 C7H801	P-METHYL PHENOL P-METHYL PHENOL
2351	N-BUTYL ACETATE	331	2.28	2.10	C7H801	P-METHYL PHENOL
2352	N-HEPTANE OL'EYL ALCOHOL	310 124	-0.35 1.80	2.35	C7H801 C7H801	P-METHYLPHENOL P-METHYLPHENOL
2353 2354	PARAFFINS	327	-0.58	,	C7H801	P-METHYL PHENOL
2355	DIETHYL ETHER	332	1.23	1.20 A	C7H8O2	BENZENE, 1, 2-DIHYDROXY, 4-METHYL BENZENE, 1, 2-DIHYDROXY, 4-METHYL
2356 2357	DI-BUTYL ETHER DI-I-PR. ETHER	332 332	0.50 0.94	1.64	C7H8O2 C7H8O2	BENZENE, 1, 2-DIHYDROXY, 4-METHYL
2358	OCTANOL	10	0.49	0.49 =	C7H802	M-HYDROXYBENZYL ALCOHOL
2359	OCTANOL	10 276	0.25 0.73	0.25 × 0.73 ×	C7H8O2 C7H8O2	P-HYDROXYBENZYL ALCOHOL G-HYDROXYBENZYL ALCOHOL
2360 2361	OCTANOL OCTANOL	10	1.58	1.58 =	C7H8O2	M-METHOXYPHENOL
2362	OLEYL ALCOHOL	124	1.15	1.70	C7H802	M-METHOXYPHENOL O-METHOXYPHENOL/GUAIACOL/
2363 2364	DIETHYL ETHER DILS	323 224 12	1.36 1.48	1.31 A 2.53 A	C7H8O2 C7H8O2	O-METHOXYPHENOL/GUATACOL/
2365	OILS	327	0.96	2.06 A	C7H8O2	O-METHOXYPHENOL/GUATACOL/
2366	OLEYL ALCOHOL	124	1.15	1.70	C7H8O2 C7H8O2	O-METHOXYPHENOL/GUAIACOL/ O-METHOXYPHENOL/GUAIACOL/
2367 2368	PARAFFINS OCTANOL	327 10	1.34	1.34 =	C7H8D2	P-METHOXYPHENOL
2369	DIETHYL ETHER	323	1.36	1.31 A	C7H802	P-METHOXYPHENOL P-METHOXYPHENOL
	CYCLOHEXANE OLEYL ALCOHOL	56 124	-1.08 1.00	1.56	C7H8O2 C7H8O2	P-HETHOXYPHENOL
2372	OCTANOL	186	0.47	0.47 =	C7H802S1	SULFONE, METHYLPHENYL
2373 2374	OCTANOL OCTANOL	56 349	0.50 2.33	0.50 = 2.33 =	C7H802S1 C7H802S1	SULFONE, METHYLPHENYL THIOPHENE, 2-CARBOXYLIC ACID, ETHYL ESTER
2375	DCTANOL	349	1.52	1.52 =	C7H8O3	FUROIC ACID, ETHYL ESTER
2376	DIETHYL ETHER	113 50	1.72 2.98		C7H803S1 C7H803S1	BENZENESULFONIC ACID, METHYL ESTER BENZENESULFONIC ACID, METHYL ESTER
	CHCL3 OCTANOL	113 56	2.74		C7H8S1	METHYLTHIOBENZENE
2379	BENZENE	311 6	-0.20		C7H9B102	M-METHYLPHENYLBORONIC ACID
2380	BENZENE BENZENE	311 6 311 6			C7H9B102 C7H9B102	O-METHYLPHENYLBORONIC ACID P-METHYLPHENYLBORONIC ACID
2381 2382	BENZENE	311 6	0.17		C7H9B102S1	P-METHYLTHIOPHENYLBORONIC ACID
2383	BENZENE	311 6		-2 02 -	C7H9B1O3 C7H9CL1N2O1	P-METHOXYPHENYLBORONIC ACID N1-METHYLNICOTINAMIDE CHLORIDE
2384 2385		373 312	-2.02 1.82	1.82 =	C7H9N1	ANILINE, N-METHYL
2386	OCTANOL	218	1.66		C7H9N1	ANILINE, N-METHYL ANILINE, N-METHYL
2387 2388	CYCLOHEXANE OCTANDL	337 255	1.23	1.09 =	C7H9NI C7H9NI	BENZYLAMINE
2389	DIETHYL ETHER	3	0.28	1.11 8	CTH9N1	BENZYLAMINE
2390 2391	DIETHYL ETHER DIETHYL ETHER	46 374	0.32 0.36	1.14 B 1.14 B	C7H9N1 C7H9N1	BENZYLAMINE BENZYLAMINE
2392	CHCL3	46	1.18	Q.78 B	C7H9N1	BENZYLAMINE
2393	BENZENE I - BUTANOI	315	0.61 0.98	0.97 B	C7H9N1 C7H9N1	BENZYLAMINE BENZYLAMINE
2394 2395	I-BUTANOL XYLENE	46	0.30		CTH9NI	BENZYLANINE
2396	N-HEPTANE	315	-0.21		C7H9N1	BENZYLAMINE 2.6-LUTIDINE
2397 2398	CHCL3 DCTANDL	280 10	2.30 1.40	1.40 =	C7H9NI C7H9NI	M-TOLUIDINE
2399	OCTANOL	301	1.43	1.43 =	C7H9N1 C7H9N1	M-TOLUIDINE M-TOLUIDINE
2700	CYCLOHEXANE	337	0.64			

NO.	SOLVENT	REF FOOT		LOGP OCT	EMPIRICAL FORMULA	NAME
2401	CYCLOHEXANE	314	0.58	,	C7H9N1	M-TOLUIDINE
2402	BENZENE	314	1.50	1.59 B	C7H9N1	H-TOLUIDINE
2403 2404	BENZENE BENZENE	313 72	1.51	1.60 B 1.43 B	C7H9N1 C7H9N1	M-TOLUIDINE M-TOLUIDINE
2405	CCL4	314	1.15		C7H9N1	M-TOLUIDINE M-TOLUIDINE
2406 2407	N-HEPTANE N-HEPTANE	310 314	0.54 0.45		C7H9N1 C7H9N1	M-TOLUIDINE
2408	OCTANE	314	0.35		CTH9N1	M-TOLUIDINE
2409 2410	OCTANOL OCTANOL	312 301	1.29 1.32	1.29 =	C7H9N1 C7H9N1	O-TOLUIDINE O-TOLUIDINE
2411	CYCLOHEXANE	337	0.67	••••	C7H9N1	O-TOLUIDINE
2412 2413	.CYCLOHEXANE BENZENE	314 314	0.61 1.53	1.61 8	C7H9N1 C7H9N1	O-TOLUIDINE O-TOLUIDINE
2414	BENZENE	72	1.13	1.31 8	C7H9N1	O-TOLUIDINE
2415 2416	CCL4 N-HEPTANE	314 310	1.18		C7H9N1 C7H9N1	O-TOLUIDINE O-TOLUIDINE
2417	N-HEPTANE	314	0.47		C7H9N1	O-TOLUIDINE O-TOLUIDINE
2418 2419	OCTANE HEXADECANE	314 314	0.37 0.38		C7H9N1 C7H9N1	O-TOLUIDINE
2420	OCTANOL	10	1.39	1.39 =	C7H9N1	P-TOLUIDINE
2421 2422	OCTANOL CYCLOHEXANE	301 337	1.41 0.58	1.41 =	C7H9N1 C7H9N1	P-TOLUIDINE P-TOLUIDINE
2423	CYCLOHEXANE	314	0.55		C7H9N1	P-TOLUIDINE
2424 2425	CHCL3 BENZENE	254 314	1.99 1.43	1.43 B 1.54 B	C7H9N1 C7H9N1	P-TOLUIDINE P-TOLUIDINE
2426	BENZENE	313	1.49	1.58 B	C7H9N1	P-TOLUIDINE
2427 2428	BENZENE BENZENE	72 375	1.38	1.52 B	C7H9N1 C7H9N1	P-TOLUIDINE P-TOLUIDINE
2429	CCL4	329	1.14	1.07 8	C7H9N1	P-TOLUIDINE
2430 2431	CCL4 N-HEPTANE	314 310	1.11		C7H9N1 C7H9N1	P-TOLUIDINE P-TOLUIDINE
2432	N-HEPTANE	254	0.51		C7H9N1	P-TOLUIDINE
2433 2434	N-HEPTANE Hexane	314 314	0.44 0.41		C7H9N1 C7H9N1	P-TOLUIDINE P-TOLUIDINE
2435	HEXANE	375	0.54		C7H9N1	P-TOLUIDINE
2436 2437	OCTANE PARAFFINS	314 316	0.33		C7H9N1 C7H9N1	P-TOLUIDINE P-TOLUIDINE
2438	HEXADECANE	314	0.36		C7H9N1	P-TOLUIDINE
24 39 24 40	DECANE OCTANOL	314 10	0.37 -0.05	-0.05 =	C7H9N1 C7H9N1O1	P-TOLUIDINE M-AMINOBENZYL ALCOHOL
2441	OCTANOL	312	0.93	0.93 =	C7H9N101	M-METHOXYANILINE/M-ANISIDINE/
2442 2443	OCTANOL CYCLDHEXANE	10 314	0.93 -0.13	0.93 =	C7H9N101 C7H9N101	M-METHOXYANILINE/M-ANISIDINE/ M-METHOXYANILINE/M-ANISIDINE/
2444	BENZENE	314	1.12	1.32 B	C7H9N101	M-METHOXYANILINE/M-ANISIDINE/
2445 2446	CCL4 N-HEPTANE	314 314	0.63 -0.28		C7H9N1O1 C7H9N1O1	M-METHOXYANILINE/M-ANISIDINE/ M-METHOXYANILINE/M-ANISIDINE/
2447	HEXADECANE	314	-0.33		C7H9N1G1	M-METHOXYANIL INE/M-ANISIDINE/
2448 2449	OCTANOL CYCLOHEXANE	31 <i>2</i> 314	0.95 0.52	0.95 =	C7H9N101 C7H9N101	O-METHOXYANILINE/O-ANISIDINE/ O-METHOXYANILINE/O-ANISIDINE/
2450	BENZENE	314	1.59	1.65 8	C7H9N1O1	O-METHCXYANILINE/O-ANISIDINE/ O-METHOXYANILINE/O-ANISIDINE/
2451 2452	CCL4 N-HEPTANE	314 314	1.22 0.39		C7H9N101 C7H9N101	O-METHOXYANILINE/O-ANISIDINE/
2453	HEXADECANE	314	0.33		C7H9N101	O-METHOXYANILINE/O-ANISIDINE/ P-METHOXYANILINE/P-ANISIDINE/
2454 2455	DCTANOL CYCLOHEXANE	312 314	0.95 -0.41	0.95 =	C7H9N101 C7H9N101	P-METHOXYANIL INE/P-ANISIDINE/
2456	BENZENE	314	0.87	1.15 B	C7H9N101	P-METHOXYANILINE/P-ANISIDINE/ P-METHOXYANILINE/P-ANISIDINE/
2457 2458	BENZENE CCL4	72 314	0.78	1.09 B	C7H9N101 C7H9N101	P-METHOXYANILINE/P-ANISIDINE/
2459	N-HEPTANE	314	-0.54		C7H9N101	P-METHOXYANILINE/P-ANISIDINE/ P-METHOXYANILINE/P-ANISIDINE/
2460 2461	HEXADECANE Diethyl ether	314 113	-0.54 0.80	0.81 A	C7H9N1O1 C7H9N1O2S1	BENZENESULFONAMIDE, N-METHYL
2462	CHCL3	113	1.31	1.84 N	C7H9N1O2S1	BENZENESULFONAMIDE,N-METHYL M-METHYLBENZENESULFONAMIDE
2463 2464	OCTANOL CHCL3	217 07 217 07	0.85 0.32	0.85 × 0.85 N	C7H9N102S1 C7H9N102S1	M-METHYLBENZENESUL FONAMIDE
2465	OCTANOL	217 07	0.84	0.84 2	C7H9N1O2S1 C7H9N1O2S1	O-METHYL BENZEN ESUL FONAMIDE O-METHYL BENZEN ESUL FONAMIDE
2466 2467	CHCL3 OCTANOL	217 07 217 07	0.46 0.82	0.96 N 0.82 =	C7H9N102S1	P-METHYL BENZENESUL FONAMI DE
2468	CHCL3	217 07	0.33	0.86 N	C7H9NL02S1 C7H9N103S1	P-METHYLBENZENESULFONAMIDE P-METHOXYBENZENESULFONAMIDE
2469 2470		217 07 217 07		0.47 = 0.70 N		P-METHOXYBENZ ENESUL FON AMIDE
2471	DIETHYL ETHER	113 113	0.37 -0.78	0.44 A -0.12 N	C7H9N3O2S2 C7H9N3O2S2	SULFATHIOCARBAMIDE SULFATHIOCARBAMIDE
2472 2473		113	-1.25	-0.98 A	C7H9N3O3S1	SULFACARBAMIDE
2474	CHCL 3	113 15 322	-2.16 -0.14	-1.41 N -0.24 B	C7H9N3O3\$1 C7H9N5	SULFACARBAMIDE 6-DIMETHYLAMINOPURINE
2475 2476		311 6	-1.83		C7H10B1N102	PHENYLBORONIC ACID, 3-AMINO, 4-METHYL
2477	OCTANOL	341 60 341 60		0.39 # -0.11 #	C7H10N2 C7H10N2	N-METHYL-3-PYRIDYLMETHYLAMINE 3-PYRIDYLETHYLAMINE
2478 2479		341 60 217 32		0.08 =	C7H10N2O2S1	P-METHYLAMINOBENZENESULFONAMIDE
2480	CHCL 3	217 32 56	-0.59 -1.22	0.03 N -1.22 =	C7H10N2O2S1 C7H10N4O2S1	P-METHYLAMINOBENZENESULFONAMIDE SULFAGUANIDINE
2481 2482		113	-2.61	-1.47 8	C7H10N402S1	SULFAGUANIDINE
2483		343 2 113 12		-1.26 N -2.38 N		SULFAGUANIDINE SULFAGUANIDINE
2484 2485		343 2	-1.47	-0.47 B	C7H10N402S1	SULFAGUANIDINE
2486 2487		343 2 343 2		-1.75 -3.37 N	C7H10N402S1 C7H10N402S1	SULFAGUANIDINE SULFAGUANIDINE
2488		194	0.07	-0.46	C7H10O6	B-CARBOXYADIPIC ACID
2489 2490		194 194	-0.50 0.13	-0.62	C7H1006 C7H1006	B-CARBOXYADIPIC ACID B-CARBOXYADIPIC ACID
2491	2-BUT ANONE	194	0.00	-0.68	C7H1006	B-CARBOXYADIPIC ACID
2492 2493	ME-I-BUT.KETONE OCTANOL	194 348	-0.83 -0.40	-2.35 -0.40 =	C7H1006 C7H11N102	B-CARBOXYADIPIC ACID N-ACETYLCYCLOBUTANECARBOXAMIDE
2494	CHCL 3	67	-1.18	· · •	C7H11N1O3	ACETYLPROLINE N-METHYLCARBAMIC ACID. 2.3-DIHYDRO-2-MEFURANYL ESTER
2495 2496		376 67	-0.59 -1.36	-1.52	C7H11N1O3 C7H11N1O5	GLUTAMIC ACID.L.N-ACETYL
2497	CHCL3	265	-0.70	-0.05 N	C7H12N2O2	CYCLOHEPTANEDIONE DIDXIME 3-METHIO-4-AMINO-6-I-PR-1,2,4-TRIAZINE-5-ONE
2498 2499		134 134	1.01 0.93	1.01 = 0.93 =		3-METHID-4-AMINO-6-N-PR-1,2,4-TRIAZINE-5-DNE
2500		134	-0.06	-0.06 =		3-METHOXY-4-AMINO-6-1-PR-1,2,4-TR1AZINE-5-ONE

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME .
2501	OCTANOL	255		1.50	1.50 =	C7H12O1	2-BUTANONE, 4-CYCLOPROPYL
2502	DIETHYL ETHER	3		1.04	1.03 A	C7H12O4	DIETHYLMALONIC ACID DIETHYLMALONIC ACID
2503 2504	I-BUTANOL DIETHYL ETHER	212		1.22	1.21 0.26 A	C7H12O4 C7H12O4	PIMELIC ACID
2505	DIETHYL ETHER	212		0.18	0.27 A	C7H1204	PIMELIC ACID
2506 2507	DIETHYL ETHER DIETHYL ETHER	207 194		0.14	0.24 A 0.14 A	C7H1204 C7H1204	PIMELIC ACID PIMELIC ACID
2508	N-BUTANOL	194		0.77	0.58	C7H12O4	PIMELIC ACID
2509 2510	I-BUTANOL ETHYL ACETATE	4 194		0.86 0.43	0.70 0.41	C7H12O4 C7H12O4	PIMELIC ACID PIMELIC ACID
2511	DIETHYL ETHER	3		-0.66	-0.46 A	C7H12O5	GLYCERYL DIACETATE
2512	OILS	2		-1.15 -1.15	-0.51 B 0.14 A	C7H12O5 C7H12O5	GLYCERYL DIACETATE GLYCERYL DIACETATE
2513 2514	OILS	214	12	-0.64	0.65 A	C7H12O5	GLYCERYL DIACETATE
2515	DIETHYL ETHER	3		-3.51 -1.09	-1.90 B -2.04	C7H12O6 C7H12O6	CYCLOHEXANECARBOXYLIC ACID-1.3,4.5-TETRAHYDROXY/QUINIC/ CYCLOHEXANECARBOXYLIC ACID-1.3,4.5-TETRAHYDROXY/QUINIC/
2516 2517	I-BUTANOL OILS	4 296		0.52	1.66 A	C7H13BR1N2O2	A-BROMO-A-ETHYLBUTYRLUREA/CARBROMAL/
2518	OLEYL ALCOHOL	82 260		0.24	1.37 0.24 =	C7H13BR1N2O2 C7H13N1O1	A-BROMO-A-ETHYLBUTYRLUREA/CARBROMAL/ 2-AZACYCLODCTANONE
2519 2520	OCTANOL CHCL3	67		-1.48	0124 -	C7H13N103	L-VALINE, ACETYL
2521	CHCL3	67		-1.34	1 00 =	C7H13N103S1 C7H13N1S1	L-METHIONINE, ACETYL 2-AZACYCLOOCTANTHIONE
2522 2523	OCTANOL OCTANOL	260 134		1.00	1.00 = 0.30 =	C7H13N501	6-1-PROPYL-4-AMINO-3-MEAMINO-1,2,4-TRIAZIN-5-ONE
2524	DIETHYL ETHER	3		-1.92	-0.82 B	C7H14N2O2	DIETHYLMALONIC ACID DIAMIDE N-BUTYLETHYLENETHIOUREA
2525	PARAFFINS XYLENE	241 46		-1.02 1.24	3.13 A	C7H14N2S1 C7H14O2	I-AMYLACETIC ACID
2526 2527	OILS	220		1.69		C7H14O2	HEPTANOIC ACID
2528	OCTANE	60		-0.13 -0.18		C7H14D2 C7H14O2	HEPTANOIC ACID
2529 2530	DODECANE HEXADECANE	60 60	47	-0.29		C7H14O2	HEPTANDIC ACID
2531	OCTANOL	268		-0.17	-0.17 =	C7H14B4 C7H14B6	GLYCERYLMONOBUTYRATE/BUTYRIN/ A-METHYLGLUCOSIDE
2532 2533	I-BUTANOL OCTANOL	4 227		-1.41 0.63	-2.48 0.63 =	C7H15CL2N2O2P1	CYTOXAN/CYCLOPHOSPHAMIDE/
2534	CCL4	234	12	0.32		C7H15N1O1	DIETHYLPROPIONAMIDE N,N-DIMETHYLVALERAMIDE
2535 2536	OILS	292 292		-0.38 -0.59	0.84 A 0.65 A	C7H15N1O1 C7H15N1O1	N-ETHYLVALERAMIDE
2537	OILS	292		-0.81	0.45 A	C7H15N1O2	N. N-DIETHYLLACTAMIDE
2538 2539	N-BUTANOL OCTANOL	377 297		-0.77 -0.25	-1.59 -0.25 =	C7H16CL1N102 C7H16N102	ACETYLCHOLINE CHLORIDE ACETYLCHOLINE CATION
2540	DIETHYL ETHER	378		-1.03	0.04 B	C7H16N2O2	CARBAMIC ACID, N. N-DIETHYLAMINOETHYL ESTER
2541	OILS	201 59		1.34	2.41 A	C7H1601 C7H1601	HE PT ANOL HE PT ANOL
2542 2543	OCTANE OODECANE	59		0.86		C7H1601	HE PT ANOL
2544	HEXADECANE	59		0.77	0.05 A	C7H1601 C7H1603	HEPTANOL GLYCEROL.1,3-DIETHYL ETHER
2545 2546	OIETHYL ETHER OILS	3 2		-0.07 -0.96	0.03 A	C7H16O3	GLYCEROL.1.3-01ETHYL ETHER
2547	OILS	214		0.05	0.48 B	C7H16O4S2	2,2-BIS(ETHYLSULFONYL) PROPANE /SULFONAL/ 2,2-BIS(ETHYLSULFONYL)PROPANE/SULFONAL/
2548 2549	OILS OILS	173 224		0.18 0.65	0.58 8 0.98 B	C7H16O4S2 C7H16O4S2	2.2-8IS(ETHYLSULFONYL)PROPANE/SULFONAL/
2550	OILS	168		0.10	0.52 8	C7H16D4S2	2, 2-BIS(ETHYL SULFONYL ) PROPANE/SULFONAL/
2551 2552	DIETHYL ETFER XYLENE	46 46		1.30	2.02 B 2.09 B	C7H17N1 C7H17N1	HEPTYLAMINE HEPTYLAMINE
2553	OCTANOL	297	46	-2.60	-2.60 =	C7H18I1N1	TRIMETHYLBUTYLAMMONIUM (ODIDE
2554	OCTANOL OCTANOL	298 206		4.20 4.81	4.20 = 4.81 =	C7H18SI1 CBH1BR4F3N2	SILANE, BUTYL-TRIMETHYL BENZIMIDAZOLE, 4, 5, 6, 7-TETRABROMO-2-TRIFLUOROMETHYL
2555 2556	CYCLOHEXANE	379	19	-0.26		C8H1CL2F3N404	BENZIMIDAZOLE, 2-TRIFLME-4, 6-DICL-5, 7-DINITRO
2557	CYCLOHEXANE OCTANOL	379 206		0.94 3.97	3.97 =	C8H1CL4F3N2 C8H1CL4F3N2	BENZIMIDAZOLE, 4, 5, 6, 7TETRACHLORO-2-TRIFLUOROME BENZIMIDAZOLE, 4, 5, 6, 7-TETRACHLORO-2-TRIFLUOROMETHYL
2558 2559	OCTANOL	206		4.08	4.08 =	C8H2BR3F3N2	BENZIMIDAZOLE, 4, 5, 6-TRIBROMO-2-TRIFLUOROMETHYL
2560	CCTANOL	206 206		3.78 3.87	3.78 = 3.87 =	C8H2CL3F3N2 C8H2CL3F3N2	BENZIMIDAZOLE, 4, 5, 7-TRICHLORO-2-TRIFLUOROMETHYL BENZIMIDAZOLE, 4, 5, 6-TRICHLORO-2-TRIFLUOROMETHYL
2561 2562	OCTANOL CYCLOHEXANE	379		0.57	3.01	C8H2CL3F3N2	BENZIMIDAZOLE, 4, 5, 6-TRICHLORO-2-TRIFLUOROMETHYL
2563	CYCLOHEXANE	379		0.42	4.15 =	C8H2CL3F3N2 C8H3BR2F3N2	BENZIMIDAZOLE:2-TRIFLUOROME-4:6:7-TRICHLORO BENZIMIDAZOLE:2-TRIFLUOROMETHYL-5:6-DIBROMO
2564 2565	OCTANOL OCTANOL	206 206		4.15 3.21	3.21 =		BENZIMIDAZOLE, 5-CHLORO-6-NITRO-2-TRIFLUOROME
2566	CYCLOHEXANE	379		-0.74		C8H3CL1F3N3O2 C8H3CL1F3N3O2	BENZIMIDAZOLE, Z-TRIFLME-4, CHLORO-6-NITRO BENZIMIDAZOLE, Z-TRIFLME-6-CHLORO-5-NITRO
2567 2568	CYCLOHEXANE CYCLOHEXANE	379 379		-0.06 0.37		C8H3CL1F3N302	BENZIMIDAZOLE, 2-TRIFLME-6-CHLORD-4-NITRU
2569	OCTANOL	206	•	2.87	2.87 =	C8H3CL2F3N2	8ENZIMIDAZOLE, 2-TRIFLUOROME-4, 7-DICHLORO BENZIMIDAZOLE, 2-TRIFLUOROME-4, 5-DICHLORO
2570	OCTANOL	206 206		3.49 3.49	3.49 = 3.49 =	C8H3CL2F3N2 C8H3CL2F3N2	BENZIMIDAZOLE, 2-TRIFLOGROME-4, 5-DICHLORO BENZIMIDAZOLE, 2-TRIFLUOROME-4, 6-DICHLORO
2571 2572	OCTANOL OCTANOL	206		3.99	3.99 =	C8H3CL2F3N2	BENZIMIDAZOLE, 2-TRIFLUOROME-5,6-DICHLORO
2573	CYCLOHEXANE	379		0.30	3.89 =	C8H3CL2F3N2 C8H3F3N4O4	BENZIMIDAZOLE, 2-TRIFLUOROME-4,5-DICHLORO BENZIMIDAZOLE, 2-TRIFLUOROME-5,6-DINITRO
2574 2575	OCTANOL CYCLOHEXANE	206 379		3.89 -1.10	3407 -	C8H3F3N4O4	BENZIMIDAZOLE.2-TRIFLUOROME-5.6-DINITRO
2576	CYCLOHEXANE	-379		-0.82 3.57	3.57 =	C8H3F3N4O4 C8H4BR1F3N2	BENZIMIDAZOLE, 2-TRIFLUOROME-4,6-DINITRO BENZIMIDAZOLE, 2-TRIFLUOROME-5-BROMO
2577 2578	OCTANOL OCTANOL	206 206		3.39	3.39 =	C8H4CL1F3N2	BENZIMIDAZOLE, 2-TRIFLUOROME-5-CHLORO
2579	CYCLOHEXANE	379		-0.31	2.93 =	C8H4CL1F3N2 C8H4CL1F3N2	BENZIMIDAZOLE, 2-TRIFLUOROME-5-CHLORO BENZIMIDAZOLE, 2-TRIFLUROME-4-CHLORO
2580 2581	OC TANOL OC TANOL	206 235		2.93 4.62	4.62 =	C8H4CL6	P-DI(TRICHLOROMETHYL)BENZENE
2582	OCTANOL	206	<b>,</b>	2.68	2.68 =	C8H4F3N302	BENZIMICAZOLE, 2-TRIFLUOROME-5-NITRO BENZIMIDAZOLE, 2-TRIFLUOROME-5-NITRO
2583 2584	CYCLOHEXANE CYCLOHEXANE	379 379		-1.70 -0.10		C8H4F3N3O2 C8H4F3N3O2	BENZIMIDAZOLE, 2-TRIFLUOROME-4-NITRO
2585	OCTANOL	218	3	3.34	3.34 =	C8H5BR1F3N101 C8H5BR1N2O4	BROMOBENZENE,P-TRIFLUOROACETAMIDO STYRENE,2-BROMO,5-NITRO,B-NITRO
2586 2587	CYCLOHEXANE DCTANOL	141 141		1.66 2.23	2.23 =		STYRENE, 2-CHLORO-5-NITRO-B-NITRO
2588	CYCLOHEXANE	141		1.49		C8H5CL1NZO4	STYRENE, 2-CHLORO, 5-NITRO, B-NITRO STYRENE, 2, 4-DICHLORO-B-NITRO
2589 2590	OCTANOL CYCLOHEXANE	141		2.53 2.68		C8H5CL2N102 C8H5CL2N102	STYRENE, 3, 4-DICHLORO, 8-NITRO
2591	CYCLOHEXANE	141	L	2.76		C8H5CL2N102	STYRENE, 2,4-DICHLORO, B-NITRO STYRENE, 2,6-DICHLORO, B-NITRO
2592 2593	CYCLOHEXANE CYCLOHEXANE	141 141		3.12 0.31		C8H5CL2N102 C8H5F1N204	STYRENE,4-FLUORO,3-NITRO,8-NITRO
2594	CYCLOHEXANE	141	l	0.87		C8H5F1N2O4	STYRENE, 2-FLUORO, 5-NITRO, B-NITRO BENZIMIDAZOLE, 2-TRIFLUOROMETHYL
2595 2596	OCTANOL CYCLOHEXANE	206 379		2.67 -0.95	2.67 =	C8H5F3N2 C8H5F3N2	BENZIMIDAZOLE, 2-TRIFLUOROMETHYL
2597	OCTANOL	10	)	2.95	2.95 =	C8H5F302	M-TRIFLUOROMETHYLBENZOIC ACID THENOYL-TRIFLUOROACETONE
2598 2599	CHCL3 BENZENE	279 380		1.73	2.79 A 2.95 A		THENOYL-TRIFLUOROACETONE
2600	BENZENE	279		1.62		C8H5F302S1	THENOYL-TRIFLUOROACETONE

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
24.01	CC1 4	279		1.30	2.54 N	C8H5F302S1	THENOYLTRIFLUOROACETONE
2601 2602	CCL4 HEXANE	279		0.68	2174 11	C8H5F302S1	THENOYLTRIFLUORDACETONE
2603	O-DICL. BENZENE	279		1.59		C8H5F3D2S1	THENOYLTRIFLUORDACETONE
2604	XYLENE	279		1.58	2.98 A	C8H5F302S1 C8H5F302S1	THEONYLTRIFLUOROACETONE THEONYLTRIFLUOROACETONE
2605 2606	TOLUÉNE OCTANOL	279 10		1.60	1.48 =	C8H5N102	M-CYANOBENZOIC ACID
2607	OCTANOL	10		1.56	1.56 =	C8H5N102	P-CYANOBENZOIC ACID
2608	DIETHYL ETHER	113		0.31	1.12 B	C8H5N1 02	INDOLE, 2, 3-DIONE/ISATIN/
2609	CHCL 3	113		0.23 1.15	0.80 N 1.15 =	C8H5N1 02 C8H5N1 02	INDOLE, 2, 3-DIONE/ISATIN/ PHTHALIMIDE
2610 2611	OCTANOL DIETHYL ETFER	113		1.03	1.02 A	C8H5N102	PHTHALIMIDE
2612	CYCLOHEXANE	304		-1.46		C8H5N102	PHTHAL IMIDE
2613	CHCL 3	113		1.08	1.60 N	C8H5N102	PHTHALIMIDE PHTHALIMIDE
2614 2615	OILS OCTANOL	381 255		0.55 2.53	1.69 A 2.53 =	C8H5N1 02 C8H6	BENZENE, ETHYNYL
2616	OCTANOL	302		2.75	2.75 =	C8H6BRICL103	PHENOXYACETIC ACID, 3-BROMO-4-CHLORO
2617	OCTANOL	309		3.00	3.00 =	C8H6BRIN1	INDOLE, 5-BROMO
2618	CYCLOHEXANE	141		2.33		C8H6BR1N102 C8H6BR1N102	STYRENE, 4-BROMO, B-NITRO STYRENE, 2-BROMO, B-NITRO
2619 2620	CYCLOHEXANE CYCLOHEXANE	141 141		2.44 2.48		C8H68R1N102	STYRENE, 3-BROMO, B-NITRO
2621	DCTANOL	302		2.20	2.20 =	C8H6CL1F103	PHENOXYACETIC ACID, 3-CHLORD-5-FLUORD
2622	OCTANOL	302		3.10	3.10 =	C8H6CL1 [ 103	PHENOXYACETIC ACID, 4-CHLORO-3-1000
2623	OCTANOL	141		2.44	2.44 = 2.57 =	C8H6CL1N102 C8H6CL1N1D2	STYRENE, 4-CHLORO-B-NITRO STYRENE, 3-CHLORO-B-NITRO
2624 2625	OCTANOL OCTANOL	141		2.57 2.85	2.85 =	C8H6CL1N102	STYRENE, 2-CHLORO-8-NITRO
2626	CYCLOHEXANE	141		2.24		C8H6CL1N1D2	ST YRENE + 4-CHLORO + B-NITRO
2627	CYCLOHEXANE	141		2.33		C8H6CL1N102	STYRENE, 3-CHLORO, 8-NITRO
2628	CYCLOHEXANE	141 302		2.52 1.85	1.85 =	C8H6CL1N102 C8H6CL1N105	STYRENE, 2-CHLORO, B-NITRO PHENOXYACETIC ACID, 4-CHLORO-3-NITRO
2629 2630	OCTANOL OCTANOL	10		2.81	2.81 =	C8H6CL203	PHENOXYACETIC ACID, 2, 4-DICHLORD
2631	OCTANOL	218		2.81	2.81 =	C8H6CL2D3	PHENOXYACETIC ACID, 3, 4-DICHLORO
2632	CTANOL	302		2.42	2.42 =	C8H6F11103 C8H6F1N102	PHENOXYACETIC ACID,5-FLUORO-3-1000 STYRENE,4-FLUORO,B-NITRO,
2633 2634	CYCLOHEXANE CYCLOHEXANE	141		1.61		C8H6F1N102	STYRENE, 3-FLUORO, B-NITRO
2635	CYCLOHEXANE	141		1.94		C8H6F1N102	STYRENE, 2-FLUORO, B-NITRO
2636	OILS	382		3.55	4.42 A	C8H6I2O3	BENZOIC ACID, 4-OH, 3, 5-DI-IODO, METHYL ESTER
2637	OCTANOL OCTANOL	360 141		0.84 1.80	0.84 = 1.80 =	C8H6N2 C8H6N2O4	QUINOXALINE STYRENE, 2-NITRO-8-NITRO
2638 2639	OCTANOL	141		1.82	1.82 =	C8H6N2O4	STYRENE, 3-NITRO-B-NITRO
26 40	OCTANOL	141		1.89	1.89 =	C8H6N2O4	STYRENE, 4-NITRO-B-NITRO
2641	CYCLOHEXANE	141		0.72		C8H6N2O4	STYRENE, 4-NITRO, 8-NITRO
2642 2643	CYCLOHEXANE	141		0.89		C8H6N2O4 C8H6N2O4	STYRENE, 2-NITRO, B-NITRO STYRENE, 3-NITRO, B-NITRO
2644	DCTANOL	276		1.63	1.63 =	C8H6N404	1-METHYL-5,7-DINITROBENZPYRAZOLE
2645	OCTANOL	218		2.67	2.67 =	C8H601	BENZOFURAN
2646	OILS	224 207		0.52 0.80	0.88 B	C8H6O2 C8H6O3	O-TOLUIC ACID LACTONE/PHTHALIDE/ BENZOYLFORMIC ACID
2647 2648	DIETHYL ETHER OILS	173		1.47	1.61 B	C8H6Q3	PIPERONAL
2649	OILS	224		2.00		C8H6G3	PIPERONAL
2650	OCTANOL	10		1.66	1.66 =	C8H6D4 C8H6D4	M-PHTHALIC ACID M-PHTHALIC ACID
2651 2652	DIETHYL ETHER DIETHYL ETHER	212		1.46	1.39 A 0.29 A	C8H6D4	O-PHTHALIC ACID
2653	DIETHYL ETHER	207		0.10	0.20 A	C8H6D4	O-PHTHALIC ACID
2654	DIETHYL ETHER	46		0.28	0.37 A	C8H6O4	G-PHTHALIC ACID
2655 2656	I-BUTANOL XYLENE	46		0.86 -1.55	0.70 0.10 A	C8H6O4 C8H6O4	O-PHTHALIC ACID O-PHTHALIC ACID
2657	ME-I-BUT.KETONE	195		0.44	0.41	C8H6O4	O-PHTHALIC ACID
2658	S-PENTANOLS	195		0.60	0.38	C8H6O4	O-PHTHALIC ACID
26 59 26 60	CHCL3 OCTANDL	218		0.70 3.12	1.85 A 3.12 *	C8H6D4 C8H6S1	PIPERONYLIC ACID BENZOTHIOPHENE.(B)
2661	OCTANOL	309		3.09	3.09 =	C8H6S1	BENZOTHIOPHENE, (8)
26€2	OILS	173	3	2.24	2.29 8	C8H7BR101	BROMOACETOPHENONE
2663	OCTANOL	10		2.37	2.37 = 2.31 =	C8H7BR102	M-BROMOPHENYLACETIC ACID
2664 2665	OCTANOL OILS	10 383		2.31 1.86	2.88 A	C8H7BR102 C8H7BR102	P-BROMOPHENYLACETIC ACID P-BROMOPHENYLACETIC ACID
2666	OCTANOL	10		2.10	2.10 =	C8H7BR103	PHENOXYACETIC ACID, 2-BROMO
2667	OCTANOL	10		2.22	2.22 =	C8H7BR103	PHENOXYACETIC ACID. 3-BROMO
2668 2669	OCTANOL OCTANOL	10 206		2.45 3.22	2.45 = 3.22 =	C8H7BR1Q3 C8H7CL1N251	PHENOXYACETIC ACID, 4-BROHO BENZIMIDAZOLE, 5-CHLORO-2-(METHYLTHID)
	CYCLOHEXANE	304		1.44		C8H7CL101	CHLOROACETEPHENONE
2671	OILS	173	3	1.99		C8H7CL101	CHLOROACETOPHENONE
2672		10		2.09 2.12	2.09 = 2.12 =	C8H7CL102 C8H7CL102	M-CHLOROPHENYLACETIC ACID P-CHLOROPHENYLACETIC ACID
2673 2674		383		1.38	2.48 A	C8H7CL102	P-CHLOROPHENYLACETIC ACID
2675	OCTANOL	10	)	2.03	2.03 =	C8H7CL1O3	PHENOXYACETIC ACID.M-CHLORO
2676		302		3.00		C8H7CL103	PHENOXYACETIC ACID,M-CHLORO PHENOXYACETIC ACID,M-CHLORO
2677 2678	ME-I-BUT-KETONE CYCLOHEXANOL	302 302		2.32 2.46		C8H7CL103 C8H7CL103	PHENOXYACETIC ACID, M-CHLORO
2679	OCTANOL	10		2.02	2.02 =	C8H7CL103	PHENOXYACETIC ACID, O-CHLORO
	OCTANOL	10		1.99	1.99 =	C8H7CL103	PHENOXYACETIC ACID, P-CHLORO
2681	OCTANOL OCTANOL	384 384		2.80 3.03	2.80 = 3.03 =		N-METHYL-3,4-DICHLOROPHENYLCARBAMATE N-METHYL-3,5-DICHLOROPHENYLCARBAMATE
	CCTANGL	10		1.65	1.65 =		M-FLUOROPHENYLACETIC ACID
2684	OCTANOL	10	)	1.50	1.50 =	C8H7F102	O-FLUOROPHENYLACETIC ACID
	OCTANOL	10		1.55		C8H7F102 C8H7F103	P-FLUOROPHENYLACETIC ACID
	OCTANOL OCTANOL .	10		1.48 1.26	1.48 = 1.26 =		PHENOXYACETIC ACID.M-FLUORO PHENOXYACETIC ACID.O-FLUORO
	OCTANOL	10		1.41		C8H7F103	PHENOXYACETIC ACID, P-FLUORO
2689	CYCLOHEXANOL	302	2	1.82		C8H7F103	PHENOXYACETIC ACID, P-FLUORO
2690 <b>2</b> 691	DETANOL DETANOL	65 65		1.86 1.82	1.86 =		P-FLUDROSULFONYLPHENYLACETIC ACID P-FLUDROSULFONYLPHENDXYACETIC ACID
	OCTANOL	10		2.78	2.78 =		PHENOXYACETIC ACID, 3-PENTAFLUOROTHIO
2693	OCTANOL	10	)	2.62		C8H71102	M-IODOPHENYLAGETIC ACID
2694 2695		10 383		2.64 1.63		C8H7I1O2 C8H7I1O2	P-IGDOPHENYLACETIC ACID P-IGDOPHENYLACETIC ACID
2696		10		2.19	2.19 =		PHENOXYACETIC ACID, 2-1000
2697	OCTANOL	10		2.44	2.44 =	C8H7I103	PHENOXYACETIC ACID, 3-1000
2698 2699		10 276		2.69 2.00	2.69 =	C8H7I1O3 C8H7N1	PHENOXYACETIC ACID.4-1000 INDOLE
2700		186		2.14		C8H7N1	INDOLE
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NO.	SOLVENT	REF F		LOGP	LOGP	EMPIRICAL	NAME
		1	NOTE	SOLV	OCT	FORMULA	
2701	OCTANOL	309		2.25	2.25 =	C8H7N1	INDOLE PHENYLACETONITRILE
2702 2703	OCTANOL CYCLOHEXANE	255 358		1.56 1.56	1.56 =	C8H7N1 C8H7N1	P-TOLUCNITRILE
2704	OCTANOL	309		1.15	1.15 =	C8H7N101	OX INDOLE
2705 2706	OCTANOL OCTANOL	56 141		2.24 2.11	2.24 =	C8H7N102 C8H7N102	STYRENE, B-NITRO STYRENE, B-NITRO
2767	CYCLOHEXANE	141		1.80		C8H7N102	STYRENE, B-NITRO
2708	DCTANDL	10		1.42	1.42 =	C8H7N1O3 C8H7N1O3	M-ACETYLNITROBENZENE P-ACETYLNITROBENZENE
2709 2710	OCTANOL OCTANOL	10 141		1.49 2.07	1.49 = 2.07 =	C8H7N103	STYRENE, 3-HYDROXY-B-NITRO
2711	DCTANDL	141		2.12	2.12 =	C8H7N103	STYRENE, 4-HYDROXY-B-NITRO
2712 2713	CYCLOHEXANE	141 141		-1.60 -1.36		C8H7N103	STYRENE, 4-HYDROXY, B-NITRO STYRENE, 3-HYDROXY, B-NITRO
2714	OCTANOL	10		1.45		C8H7N1O4	M-NITROPHENYLACETIC ACID
2715	OCTANOL GILS	10 383		1.39 0.43	1.39 = 1.61 A	C8H7N104 C8H7N104	P-NITROPHENYLACETIC ACID P-NITROPHENYLACETIC ACID
2716 2717	DCTANOL	10		1.37	1.37 =	C8H7N105	PHENOXYACETIC ACID, M-NITRO
2718	CYCLOHEXANONE	302 302		2.77 1.88		C8H7N105 C8H7N105	PHENOXYACETIC ACID,M-NITRO PHENOXYACETIC ACID,M-NITRO
2719 2720	ME-I-BUT.KETONE CYCLOHEXANOL	302		1.93		C8H7N105	PHENOXYACETIC ACID.H-NITRO
2721	OCTANOL	10		1.22	1.22 =	C8H7N1O5	PHENOXYACETIC ACID,O-NITRO PHENOXYACETIC ACID,P-NITRO
2722 2723	OCTANOL OCTANOL	10 238		1.48 2.83	1.48 = 2.83 =	C8H7N1O5 C8H7N1S1	BENZYL ISOTHIOCYANATE
2724	CHCL 3	322		2.00	2.38 N	C8H7N1S2	METHYLTHIOBENZOTHIAZOLE N-METHYL-2-BROMOPHENYLCARBAMATE
2725 2726	OCTANOL OCTANOL	384 384		1.77 2.25	1.77 = 2.25 =	C8H8BR1N102 C8H8BR1N102	N-METHYL-3-BROMOPHENYL CARBAMATE
2727	OCTANOL	384		2.17	2.17 =	C8H8BR1N1O2	N-METHYL-4-BROMOPHENYL CARBAMATE
2728	OCTANOL OCTANOL	384 384		1.64 2.03	1.64 = 2.03 =	C8H8CL1N102 C8H8CL1N102	N-METHYL-2-CHLOROPHENYLCARBAMATE N-METHYL-3-CHLOROPHENYLCARBAMATE
2729. 2730	OCTANOL	384		2.01	2.01 =	C8H8CL1N1O2	N-METHYL-4-CHLOROPHENYLCARBAMATE
2731	DCTANOL	302		1.16	1.16 =	C8H8CL1N1G3 C8H8F1N1G2	PHENOXYACETIC ACID,3-AMINO-4-CHLORO N-METHYL-2-FLUOROPHENYLCARBAMATE
2732 2733	OCTANOL OCTANOL	384 384		1.25 1.48	1.25 =	C8H8F1N102	N-METHYL-3-FLUOROPHENYLCARBAMATE
2734	OCTANOL	384		1.28	1.28 =	C8H8F1N102	N-METHYL-4-FLUOROPHENYLCARBAMATE P-ACETAMIDO-BENZENESULFONYLFLUORIDE
2735 2736	OCTANDL DIETHYL ETFER	65 306		2.17 1.64	2.17 = 1.60 A	C8H8F1N103S1 C8H8I1N104S1	N-(P-IODOBENZENESULFONYL)GLYCINE
2737	CHCL 3	306		-0.20	1.00 A	C8H8I1N104S1	N-(P-IODOBENZENESULFONYL)GLYCINE
2738 2739	CCL4 CLCH2CH2CL	306 306	12	-2.00 0.32	0.15 A	C8H8I1N104S1 C8H8I1N104S1	N-(P-IODOBENZENESULFONYL)GLYCINE N-(P-IODOBENZENESULFONYL)GLYCINE
2740	OCTANOL	384		1.02	1.02 =	C8H8N2 04	N-METHYL-2-NITROPHENYL CARBAMATE
2741 2742	OCTANOL OCTANOL	384 384		1.39	1.39 = 1.47 =	C8H8N2O4 C8H8N2O4	N-METHYL-3-NITROPHENYLCARBAMATE N-METHYL-4-NITROPHENYLCARBAMATE
2743	OCTANOL	10		1.58	1.58 =	C8H801	AC ETOPHENONE
2744 2745	DIETHYL ETFER BENZENE	248 248	50 12	1.75 2.20	1.67 A 2.07 B	C8H8O1 C8H8O1	AC ETOPHENONE AC ETOPHENONE
2746	C L CH2CH2CL	248		2.38		C8H8O1	AC ET OP HENONE
2747 2748	OCTANOL OCTANOL	268 10		2.23 1.49	2.23 = 1.49 =	C8H801S1 C8H802	THIDACETIC ACID, S-PHENYL ESTER ACETIC ACID, PHENYL ESTER
2749	DCTANOL	10		1.39	1.39 =	C8H8O2	M-ACETYL PHENOL
2750 2751	OCTANOL CYCLOHEXANE	10 56		1.35 -2.14	1.35 =	C8H802 C8H802	P-ACETYL PHENOL P-ACETYL PHENOL
2752	OCTANOL	10		2.12		C8H8D2	BENZOIC ACID, METHYL ESTER
2753 2754	OCTANOL DIETHYL ETFER	10		1.41	1.41 = 1.49 A	C8H8D2 C8H8O2	PHENYLACETIC ACID PHENYLACETIC ACID
2755	DIETHYL ETHER	207		1.33	1.28 A	C8H802	PHENYL ACETIC ACID
2756 2757	DIETHYL ETHER CHCL3	46 29	12	1.44	1.37 A 1.63 A	C8H8O2 C8H8O2	PHENYLACETIC ACID PHENYLACETIC ACID
2758	OILS	361		0.35	1.57 A	C8H8D2	PHENYLACETIC ACID
2759	OILS	362 385		0.13 0.26	1.33 A 1.42 A	C8H8O2 C8H8O2	PHENYLACETIC ACID PHENYLACETIC ACID
2760 2761	BENZENE	29		-0.03	1.38 A	C8H8O2	PHENYLACETIC ACID
2762	I-BUTANOL	4 46		1.43	1.51 1.38 A	C8H8O2 C8H8O2	PHENYLACETIC ACID PHENYLACETIC ACID
2763 2764	XYLENE TOLUENE	48		0.09	1.66 A	C8H802	PHENYLACETIC ACID
2765	TOLUENE	29 48		-0.13 0.67	1.46 A 1.42	C8H8O2 C8H8O2	PHENYLACETIC ACID PHENYLACETIC ACID
2766 2767	NITROBENZENE Prim. Pentanols	48		1.48	1.57	C8H8O2	PHENYLACETIC ACID
2768	OCTANOL CYCLOHEXANE	10 357		2.37 0.65	2.37 =	C8H802 C8H802	M-TOLUIC ACID O-TOLUIC ACID
2769 2770	CHCL3	29	25	1.76	2.83 A	C8H8O2	O-TOLUIC ACID
2771	TOLUENE	29		1.10	2.54 A	C8H8O2 C8H8O2	O-TOLUIC ACID P-TOLUIC ACID
2772	OCTANOL CHCL 3	10 29	12	2.27 1.81	2.91 A	CBH8OZ	P-TOLUIC ACID
2774	TOLUENE	29 386		0.68	2.18 A 1.91 =	C8H8O2 C8H8O2S1	P-TOLUIC ACID PHENYLTHIO-ACETIC ACID
2775 2776		279		2.40	3.70 A	C8H802S1	THENOYLACETONE
2777	CCL4	279		2.06	3.57 N	C8H802S1 C8H802S1	THENDYLACETONE THENDYLACETONE
2778 2779	HEXANE O-DICL. BENZENE	279 279		1.30 2.49		C8H8D2S1	THENDYLACETONE
2780	OCTANOL	386		2.05	2.05 =		PHENYLSELENO-ACETIC ACID 1-(2-SELENOPHEN-YL)-1,3-BUTANEDIONE
2781 2782		387 388		2.92 3.39	3.89 A 4.30 A	C8H8O2SE1	1-(2-SELENOPHEN-YL)-1,3-BUTANEDIONE
2783		387		3.00	4.30 A	C8H8G2SE1 C8H8G2SE1	1-(2-SELENOPHEN-YL)-1, 3-BUTANEDIONE 1-(2-SELENOPHEN-YL)-1, 3-BUTANEDIONE
2784 2785	DIETHYL ETHER	388 323		2.92 1.35	4.23 A 1.30 A	C8H803	BENZALDEHYDE, 2-HYDROXY-3-METHOXY/O-VANILLIN/
2786 2787	DIETHYL ETHER DIETHYL ETHER	3 323		0.97 0.91	0.96 A 0.91 A		BENZALDEHYDE, 3-METHOXY, 4-HYDROXY/VANILLIN/ BENZALDEHYDE, 3-METHOXY-4-HYDROXY/VANILLIN/
2788	DIETHYL ETHER	359		0.93	0.94 A	C8H8O3	BENZALDEHYDE, 3-METHOXY, 4-HYDROXY/VANILLIN/
2789 2790	DIETHYL ETHER CYCLDHEXANE	248 248		0.96 -0.75	0.96 A	C8H8O3 C8H8O3	BENZALDEHYDE, 3-METHOXY-4-HYDROXY/VANILLIN/ BENZALDEHYDE, 3-METHOXY-4-HYDROXY/VANILLIN/
2791	CHCL3	366		1.42	1.92 N	C8H803	BENZALDEHYDE, 3-METHOXY-4-HYDROXY/VANILLIN/
2792 2793		173 224		0.42	1.58 A 1.63 A	C8H8O3 C8H8O3	BENZALDEHYDE, 3-METHOXY, 4-HYDROXY/VANILLIN/ BENZALDEHYDE, 3-METHOXY-4-HYDROXY/VANILLIN/
2794	BENZENE	389		0.81	2.20 A	C8H803	BENZAL DEHYDE, 3-METHOXY, 4-HYDROXY/VANILLIN/
2795 2796	BENZENE TOLUENE	248 389		0.82 0.64	2.21 A 2.14 A	C8H8O3 C8H8O3	BENZAL DEHYDE, 3-METHOXY-4-HYDROXY/VANILLIN/ BENZAL DEHYDE, 3-METHOXY, 4-HYDROXY/VANILLIN/
2797	CF CH5CH5CF	248		1.29		C8H8D3	BENZAL DEHYDE, 3-METHOXY-4-HYDROXY/VANILLIN/
2798 2799	DI-1-PR. ETHER OCTANGL	366 186		0.60	1.24 1.05 =	C8H8D3 C8H8O3	BENZALDEHYDE, 3-METHOXY, 4-HYDROXY/VANILLIN/ BENZYL ALCOHOL, 3, 4-METHYLENEDIOXY
2800	OCTANOL	261		1.89		C8H8O3	M-CARBOMETHOXYPHENOL

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
2801	OCTANOL	261		1.96	1.96 =	C8H8D3	P-CARBONETHOXYPHENOL
2802	OCTANOL	235		1.96	1.96 =		P-HYDROXYBENZOIC ACID, METHYL ESTER M-Hydroxyphenylacetic acid
2803	OCTANOL	· 10		0.85 0.85	0.85 = 0.85 =	C8H8U3 C8H8U3	O-HYDROXYPHENYLACETIC ACID
2804 2805	OCTANOL OILS	383		-1.04	0.27 A	C8HB03	P-HYDROXYPHENYLACETIC ACID
2806	DCTANOL	10		2.02	2.02 *	C8H8O3	N-HETHOXYBENZOIC ACID
2807	DIETHYL ETHER	112		0.78 1.65	0.80 A 2.72 A	*******	O-METHOXYBENZOIC ACID O-METHOXYBENZOIC ACID
2808 2809	CHCL3	29		1.65	2.93 A	C8HBO3	O-METHOXYBENZOIC ACID
	BENZENE	17		0.64	2.02 A	C8H8D3	O-METHOXYBENZOIC ACID O-METHOXYBENZOIC ACID
	TOLUENE OCTANOL	29		0.45	1.97 A 1.96 =		P-METHOXYBENZOIC ACID/ANISIC ACID/
	CHCL3	29	12	1.96	2.56 A	C8H8D3	P-METHOXYBENZOIC ACID/ANISIC ACID/
2814	CHCL3	46		0.90	2.04 A 1.85 A	C8H8O3	P-METHOXYBENZOIC ACID/ANISIC ACID/ P-METHOXYBENZOIC ACID/ANISIC ACID/
	BENZENE XYŁENE	17 46		0.46 -0.26	1.51 A	C8H8O3 C8H8O3	P-METHOXYBENZOIC ACID/ANISIC ACID/
	TOLUENE	29		0.54	2.05 A	C8H8D3	P-METHOXYBENZOIC ACID/ANISIC ACID/
2818	GCTANOL CYCLOHEXANONE	10		1.26 2.18	1.26 =	C8H8U3	PHENDXYACETIC ACID PHENDXYACETIC ACID
2819 2820	ME-I-BUT.KETONE	302				C8H8D3	PHENOXYACETIC ACID
2821	CYCLOHEXANOL	302		1.61		C8H8O3	PHENDXYACETIC ACID
2822	ME-I-BUT.KETONE CYCLOHEXANOL DIETHYL ETHER OIETHYL ETHER OIETHYL ETHER CHCL3 BENZENE I-BUTANOL	207		0.35	0.42 A	C8H8O3 C8H8O3	PHENOXYACETIC ACID PHENYLACETIC ACID, A-HYDROXY/MANDELIC ACID/ PHENOXYACETIC ACID, A-HYDROXY PHENOXYACETIC ACID, B-HYDROXY PHENOXYACETIC ACID, P-HYDROXY BENZENE, 2-BROMD-I-ETHYL BENZENE, 2-BROMD-I-ETHYL ACETANILIDE ACETANILIDE ACETANILIDE
2824	DIETHYL ETHER	46		0.28	0.37 A	C8H8O3	PHENYLACETIC ACID, A-HYDROXY/MANDELIC ACID/
2825	CHCL 3	29		-1.26	0.07 A	C8H8D3	PHENYL ACETIC ACID, A-HYDROXY/MANDELIC ACID/
2826	BENZENE	36	12	-1.95	0.07 A -0.54 A 0.50 0.76 =	C8H8U3	PHENYLACETIC ACID, A-HYDROXY/MANDELIC ACID/
	I-BUTANOL DCTANOL	10		0.76	0.76 =	C8H804	PHENOXYACETIC ACID.H-HYDROXY
2829	UC I ANUL	302		U. 03	V. 0.	C8H8D4	PHENOXYACETIC ACID-0-HYDROXY
2830	OCTANOL CYCLOHEXANONE	10		0.65 1.91	0.65 =	C8H8U4 C8H8U4	PHENDXYACETIC ACID.P-HYDROXY
2831 2832	ME-1-BUT.KETONE	302		1.05		C8H8D4	PHENOXYACETIC ACID.P-HYDROXY
2833	CYCLOHEXANOL	302		1.32		C8H8O4	PHENOXYACETIC ACID+P-HYDROXY
2834	OCTANOL OCTANOL	255 255			3.09 = 2.95 =	C8H9CL1	BENZENE, 2-CHLORO-1-ETHYL
2836	OCTANOL	10		1.16	1.16 =	C8H9NLU1	ACETANILIDE
2837	DIETHYL ETFER			0.48	1.28 B	C8H9N101 C8H9N101	ACETANILIDE ACETANILIDE
	DIETHYL ETHER CHCL3	359 359		0.50	1.29 B 1.41 N		ACETANILIDE
	CHCL 3	254		0.88	1.39 N	C8H9N101	AC ET AN IL IDE
2841	CHCL3	359 254 338 173	44	0.48	1.06 N	C8H9N101	ACETANILIDE
	OILS	224		0.00	1.19 A	C8H9N101 C8H9N101	ACETANILIDE ACETANILIDE
	BENZENE			-1.70		C8H9N1O1	ACETANILIDE
	BENZENE	72		0.22	1.59 A	C8H9N101	ACETANILIDE ACETANILIDE
	N-HEPTANE N-HEPTANE	338	44	-1.70 -2.00		C8H9N101 C8H9N101	AC ET AN IL IDE
	TOLUENE	151	• • •	1.77	3.13 A	CBH9N101	N-METHYL-SALICYLIDENEIMINE /SCHIFF BASE/
2849	CYCLOHEXANE	151		0.95	A 45 -	C8H9N1O1	N-METHYL-SALICYLIDINEIMINE /SCHIFF BASE/ PHENYLACETAMIDE
2850 2851		255 390		0.45 1.09	1.63	C8H9N101 C8H9N102	P-AMINOBENZOIC ACID, METHYL ESTER
	DILS	202		-0.89	0.40 A	C8H9N1 02	P-AMINOPHENYLACETIC ACID
2853	CHCL3	29 29		0.81		C8H9N102	ANTHRANILIC ACID+N-METHYL ANTHRANILIC ACID+N-METHYL
2854 2855	TOLUENE CYCLOHEXANE	141		1.81	2.11 W	C8H9N102 C8H9N102	BENZENE, B-NITROETHYL
2856	OCTANOL	65		2.95		C8H9N1 02	1.3-DIMETHYL-2-NITROBENZENE
2857	OCTANOL OCTANOL	386 276		0.62 0.94	0.62 = 0.94 =	C8H9N1 02 C8H9N1 02	GLYCINE, N-PHENYL M-METHOXYBENZAMIDE
2859		276		0.87	0.87 ≭	C8H9N102	O-METHOXYBENZAMIDE
		276		0.86	0.86 =	C8H9N1 02	P-METHOXYBENZAMI DE
	OCTANOL OCTANOL	384 186		1.16 1.24	1.16 =	C8H9N102 C8H9N102	N-METHYLPHENYL CARBAMATE N-METHYLPHENYL CARBAMATE
	HEXANE	391		-0.54		C8H9N1O2	N-METHYL PHENYL CARBANATE
2864		349					NICOTINIC ACID, ETHYL ESTER
	OCTANOL OCTANOL	349 349		1.43 0.87	1.43 =	C8H9N1O2 C8H9N1O2	I-NICOTINIC ACID, ETHYL ESTER PICOLINIC ACID, ETHYL ESTER
2867	OILS	381		-0-01		C8H9N1 02	TETRAHYDROPHTHAL IM I DE
2868				0.28	1 61 A	C8H9N1 03 C8H9N1 03	P-AMINOSALICYLIC ACID, METHYL ESTER ORTHOCAINE
	OILS CYCLOHEXANCNE	249 302		0.25	1441 4	C8H9N103	PHENDXYACETIC ACID, P-AMINO
	OCTANOL	217		0.20	0.20 =		P-ACETYL BENZENESUL FONAMI DE
2872 2873		217 276		-0.36 1.61		C8H9N103S1 C8H9N301S1	P-ACETYL BENZENESUL FONAMIDE M-HYDROXYBENZYL IDINETHIOUREA
2874	OCTANOL	226		-0.57	-0.57 =	C8H9N3O2	1-ACETYL-2-PICOLINOYLHYDRAZINE (68626)
2875		255		3.15	3.15 =		BENZENE, ETHYL
2876 2877		301 310		3.20 3.54	3.20 =	C8H10 C8H10	M-XYLENE
2878		301		2.77	2.77 =	C8H10	0-XYLENE
2879		310		3.39	2.15	C8H10	0-XYLENE
2880 2881	OCTANOL N-HEPTANE	301 310		3.15 3.45	3.15 =	C8H10 C8H10	P-XYLENE P-XYLENE
	OCTANOL	80		1.71	1.71 =	C8H10CL1N102	O-(1-ETHYL-1-ETHYNYL-3-CHLOROALLYL)CARBAMATE
	OCTANDL	392		2.04		CBH10N105P1S1	DIMETHYL PARATHION
2884 2885	CHCL 3 BENZENE	392 392		1.38 1.28	0.97 B	C8H10N105P1S1 C8H10N105P1S1	DIMETHYLPARATHION DIMETHYLPARATHION
2886		392		1.33	1.33 =		DIMETHYL PARA-OXON
2887		392		1.33	0.91 B	C8H10N106P1	DI METHYL PARA-OXON DI METHYL PARA-OXON
2888 2889	BENZENE BENZENE	392 72		1.17	1.36 B 1.73 B	C8H10N1O6P1 C8H10N2O1	DIMETHYLPARA-UXUN P-NITROSODIMETHYLANILINE
2890	DCTANOL	186		0.42	0.42 =	C8H10N2O1	UREA, 1-METHYL-1-PHENYL
2891	DIETHYL ETFER CHCL3	113 343		-0.67 -0.66	-0.47 A	C8H10N2O3S1 C8H10N2O3S1	SULFANILACETAMIDE SULFANILACETAMIDE
2892		113		-0.12	0.48 N	C8H10N2O3S1	SULFANIL ACETAMIDE
2894	CHCL3	393	63	-0.35	0.27 N	C8H10N2O3S1	SULFANILACETAMIDE
2895 2896	BENZENE I-PENT. ACETATE	343 343		-1.54 -0.06	-0.14 A -0.24	C8H10N2O3S1 C8H10N2O3S1	SULFANILACETAMIDE SULFANILACETAMIDE
2897	CCL4	343	2	-1.77	-1.72 N	C8H10N2O3S1	SULFANILACETAMIDE
2898	OCTANOL OCTANOL	186 218		0.85 -0.07	0.85 =	C8H10N251 C8H10N402	UREA,1-METHYL-1-PHENYL-2-THIO CAFFEINE
2899 2900	DIETHYL ETHER	218		-1.30	-0.07 = -0.30 B		CAFFEINE

NO.	SOLVENT .	REF			LOGP	EMPIRICAL	NAME
2901	CHCL3	394	42 42	\$0LV 1.33	0.91 B	FORMULA C8H10N4O2	CAFFEINE
2902	CHCL3	359	42	1.32	0.86 B	C8H10N402	CAFFEINE
2903 2904	CHCL3	322 371	42	1.28 -0.40	0.87 B	C8H10N4O2 C8H10N4O2	CAFFEINE CAFFEINE
2905	OILS	2	12	-1.48	-0.79 8	C8H10N4O2	CAFFEINE
2906 2907	OILS I-BUTANOL	249 4		-1.13 0.08	-0.50 B -0.39	C8H10N4U2 C8H10N4U2	CAFFEINE CAFFEINE
2908	I-PENT. ACETATE	395	14	-2.22	-0.57	C8H10N402	CAFFEINE
2909	CCL4 BENZENE	234 368	12 68	-0.68 -0.16	0.44 8	C8H10N4O2 C8H10N4O2	CAFFEINE CAFFIENE
2910 2911	OCTANOL	206	27	3.58	3.58 =	C8H10N4O6S3	PURINE, 2,6,8-TRI-METHYLSULFONYL
2912	CYCLOHEXANE	325		0.51		C8H1001 C8H1001	2, 3-DIMETHYL PHENOL 2, 3-DIMETHYL PHENOL
2913 2914	N-HEPTANE CYCLOHEXANE	310 132		0.43 0.76		C8H1001	2.4-DIMETHYLPHENOL
2915	CYCLOHEXANE	325		0.55		C8H1001	2,4-DIMETHYLPHENOL 2,4-DIMETHYLPHENOL
2916 2917	N-HEPTANE CYCLOHEXANE	310 132		0.40 0.77		C8H1001 C8H1001	2,5-DIMETHYLPHENOL
2918	CYCLOHEXANE	325		0.57		C8H1001	2,5-DIMETHYLPHENOL 2,5-DIMETHYLPHENOL
2919 2920	N-FEPTANE OCTANOL	310 261		0.52 2.36	2.36 =	C8H1001	2,6-DI METHYLPHENOL
2921	DIETHYL ETHER	323		2.53	2.33 A	C8H1001	2,6-DIMETHYLPHENOL 2,6-DIMETHYLPHENOL
2922 2923	CYCLOHEXANE CYCLOHEXANE	132 325		1.28		C8H1001 C8H1001	2,6-DIMETHYLPHENOL
2924	N-HEPTANE	310		0.82		C8H1001	2,6-DIMETHYLPHENOL
2925 2926	CYCLOHEXANE N-HEPTANE	325 310		0.20		C8H1001 C8H1001	3,4-DIMETHYLPHENOL 3,4-DIMETHYLPHENOL
2927	OCTANOL	261		2.35	2.35 =	C8H1001	3,5-DIMETHYLPHENOL
29 28 29 29	CYCLOHEXANE CYCLOHEXANE	132 325		0.54 0.27		C8H1001 C8H1001	3,5-DIMETHYLPHENOL 3,5-DIMETHYLPHENOL
2930	N-FEPTANE	310		0.21		C8H1001	3,5-DIMETHYLPHENOL
2931 2932	OCTANOL HEXANE	255 372		1.36 -0.39	1.36 =	C8H1001 C8H1001	ET HANOL, 2-P HEN YL ET HANOL, 2-P HEN YL
2933	OCTANOL	iö		2.40	2.40 =	C8H1001	H-ET HYLPHENOL
2934 2935	CYCLOHEXANE CYCLOHEXANE	132 325		0.43		C8H1001	M-ETHYLPHENOL M-ETHYLPHENOL
2936	CYCLOHEXANE	132		0.83		C8H1001	O-ETHYLPHENOL
2937 2938	CYCLOHEXANE CYCLOHEXANE	325 132		0.68		C8H1001	O-ETHYL PHENOL P-ETHYL PHENOL
	CYCLOHEXANE	325		0.37		C8H1001	P-ETHYLPHENOL
	OILS OILS	324 327	12	1.79 1.62	2.81 A 2.66 A		P-ET HYL PHENOL P-ET HYL PHENOL
2941 2942	BENZENE	324	45	1.44	2.78 A		P-ETHYLPHENOL
2943	PARAFFINS	327 10		0.04 1.60	1 60 =	C8H1001 C8H1001	P-ETHYLPHENOL H-METHYLBENZYL ALCOHOL
2944 2945	OCTANDL OCTANDL	10		1.58		C8H10D1	P-METHYLBENZYL ALCOHOL
2946	CYCLOHEXANE	358		2.77 1.65	1.57 A	C8H1001 C8H1002	PHENETOLE BENZENE, 1, 2-DIHYDROXY-4-ETHYL
2947 2948	DIETHYL ETHER DI-BUTYL ETHER	332 332		0.88		C8H10O2	BENZENE, 1, 2-DIHYDROXY, 4-ETHYL
2949	DI-I-PR. ETHER	332		1.39	2.16	C8H1002 C8H1002	BENZENE, 1, 2-DIHYDROXY, 4-ETHYL BENZENE, 1, 3-DIMETHOXY
2950 2951	CYCLOHEXANE OILS	358 173		2.32 2.15	3.14 A	C8H1002	BENZENE, 1, 4-DIHETHOXY
2952	OILS	224 261		2.21 1.81	3.20 A 1.81 =	C8H1002 C8H1002	BENZENE, 1, 4-DIMETHOXY P-ETHOXYPHENOL
2953 2954	OCTANOL OCTANOL	10		1.10	1.10 =	C8H1002	P-METHOXYBENZYL ALCOHOL
2955	OILS	327 327		1.26 0.71	2.33 A	C8H1002 C8H1002	PHENOL, 2-METHOXY-4-METHYL/P-METHYLGUAIACOL/ PHENOL, 2-METHOXY-4-METHYL/P-METHYLGUAIACOL/
2956 2957	PARAFFINS OCTANOL	56		1.16	1.16 =		2-PHENCXYETHANOL
2958	N-BUTYL ACETATE	331 331		1.21	1.26 1.62	C8H1002 C8H1002	RESORCINOL, 4,5-DIMETHYL RESORCINOL, 2,4-DIMETHYL
2959 2960	N-BUTYL ACETATE	331		1.94	1.82	C8H1002	RESORCINOL, 2, 5-DIMETHYL
2961	DIETHYL ETHER	323 323		-0.20 0.74	-0.06 A	C8H10O3	BENZYL ALCOHOL,4-HYDROXY,3-METHOXY PHENOL,2,6-DIMETHOXY
2962 2963	DIETHYL ETFER DILS	327		0.57		C8H10O3	PHENOL, 2, 6-DIMETHOXY
2964	PARAFFINS	327	6	-0.36 -0.01		C8H1003 C8H118103	PHENOL, 2, 6-DIMETHOXY P-ETHOXYPHENYLBORONIC ACID
2965 2966	BENZENE DCTANOL	311 373	۰	-2.02	-2.02 =		NI-ETHYLNICOTINAMIDE CHLORIDE
2967	DIETHYL ETHER	46		0.78 0.85	1.54 B	C8H11N1 C8H11N1	BENZYLMETHYLAMINE BENZYLMETHYLAMINE
	THE THE THER	374 46		1.39	2.03 B	C8H11N1	BENZYLMETHYLAMINE
	OCTANOL	10		2.31		C8H11N1 C8H11N1	n, n-di methyl an il ine n, n-di methyl an il ine
	OCTANOL CYCLOHEXANE	309 337		2.62 2.47	2.02	C8H11N1	n, n-dimethyl an il ine
2973	N-HEPTANE	310 337		1.00		C8H11N1 C8H11N1	2, 3–DI METHYLAN IL INE 2, 4–DI METHYLAN IL INE
	CYCLOHEXANE XYLENE	46		1.18	1.85 B	CBHIINI	2, 4-DI METHYLAN IL INE
2976	N-HEPTANE	310 337		1.10		C8H11N1 C8H11N1	2, 4~DIMETHYLANIL INE 2, 5~DIMETHYLANIL INE
	CYCLOHEXANE N-HEPTANE	310		1.12		C8H11N1	2, S-DIMETHYLANIL INE
	CYCLOHEXANE	337		1.35		C8H11N1 C8H11N1	2, 6–DI METHYLANIL INE 2, 6–DI METHYLANIL INE
	N-HEPTANE XYLENE	310 46		1.21 1.05	1.70 8	C8H11N1	3, 4-DIMETHYLANILINE
2982	N-HEPTANE	310 337		0-95		C8H11N1 C8H11N1	3,4-dimethylanil ine 3,5-dimethylanil ine
	CYCLOHEXANE OCTANOL	255		1.18 1.41	1.41 =	CSHIINI	et hylamine, 2-phenyl
2985	CHCL3	396	31	1.32	0.91 B	C8H11NL C8H11NL	ETHYLAMINE, 2-PHENYL ETHYLAMINE, 2-PHENYL
2987	N-HEPTANE OCTANOL	312	- 4	2.26	2.26 =	C8H11N1	N-ETHYLANILINE
2988	XYLENE TOLUENE	73 73		1.72	2.36 B	C8H11NI C8H11N1	PYRIDINE, 2-METHYL, 5-ETHYL PYRIDINE, 2-METHYL, 5-ETHYL
2990	OCTANOL	9		2.10	2-10 =	C8H11N1	PYRIDINE, 4-PROPYL
2991 2992		188		1.43 1.56	1.72 B 1.56 =	C8H11N1 C8H11N1O1	PYRIDINE, 2, 4,6-TRIMETHYL/COLLIDIN/ 3-DIMETHYLAMINOPHENOL
2993	OCTANOL	80		1.09	1.09 =	C8H11N102	O-(1-ETHYL-1-VINYL-2-PROPYNYL) CARBAMATE
2994 2995	OILS Diethyl ether	381 113		0.16 1.11	1.34 A 1.09 A		HEXAHYDROPHTHALIMIDE BENZENESULFONAMIDE,N-ETHYL
2996	CHCL3	113		1.77	2.28 N	C8H11N102S1	BENZENESUL FONAMIDE.N-ETHYL N.N-DIMETHYL BENZENESUL FONAMIDE
	DIETHYL ETFER CHCL3	113 113		1.16 2.69	1.13 A 3.11 N	C8H11N102S1 C8H11N102S1	N. N-DIMETHYLBENZENESULFONANIDE
2999	OCTANOL	227		-2.14	-2.14 =	C8H11N3O6	6-AZAURIDINE (NCS 32074)(PKA= 6.63) ADENINE,9-PROPYL
3000	COTANOL	397		0.74	U. (** **	C8H11N5	PRESENT CITY

NO.	SOLVENT	REF	FOOT NOTE		LOGP OCT	EMPIRICAL FORMULA	NAME
3001	OCTANOL	341	60	0.49	0.49 =	C8H12N2	N. N-DIMETHYL-3-PYRIDYLHETHYLAHINE
3002 3003	OCTANOL CHCL3	341 322	60	0.76 0.88	0.76 = 1.36 N	C8H12N2 C8H12N2O151	N-ETHYL-3-PYRIDYLMETHYLAMINE 2-METHIO-4-HYDROXYTRIMETHYLENEPYRIMIDINE
3004 3005	OCTANOL OILS	56 398	44	0.81	0.81 = 1.52 A	C8H12N2O2S1 C8H12N2O2S1	PHENETHYL SULFAMIDE 2-THIO-5,5-DIETHYLBARBITURIC ACID/THIOBARBITAL/
3006	OCTANOL	80		0.65	0.65 =	C8H12N2O3	5,5-DIETHYLBARBITURIC ACID/BARBITAL/VERONAL/
30C7 3008	DIETHYL ETHER CHCL3	113 399	16	0.63 -0.14	0.67 A 0.49 N	C8H12N2O3 C8H12N2O3	5.5-DIETHYLBARBITURIC ACID/BARBITAL/YERONAL/ 5.5-DIETHYLBARBITURIC ACID/BARBITAL/YERONAL/
3009	CHCL 3	113	•	-0.07	0.54 N	C8H12N2O3	5,5-DIETHYLBARBITURIC ACID/BARBITAL/VERONAL/
3010 3011	CHCL3 CHCL3	254 338	44	-0.15 0.45	0.45 N 1.03 N	C8H12N2O3 C8H12N2O3	5.5-DIETHYLBARBITURIC ACID/BARBITAL/VERONAL/ 5.5-DIETHYLBARBITURIC ACID/BARBITAL/VERONAL/
3012	OILS	82		-0.72	0.54 A	C8H12N2O3 C8H12N2O3	5.5-DIETHYLBARBITURIC ACID/BARBITAL/VERONAL/ 5.5-DIETHYLBARBITURIC ACID/BARBITAL/VERONAL/
3013 3014	OILS	345 398	44	-0.67 -0.58	0.68 A	C8H12N2O3	5.5-DIETHYLBARBITURIC ACID/BARBITAL/VERONAL/
3015 3016	OILS	296 168	12	-1.22 -0.57	0.08 A 0.69 A	C8H12N2O3 C8H12N2O3	5,5-DIETHYLBARBITURIC ACID/BARBITAL/YERONAL/ 5,5-DIETHYLBARBITURIC ACID/BARBITAL/YERONAL/
3017	OILS	290	_	-0.96	0.32 A	C8H12N2O3 .	5.5-DIETHYLBARBITURIC ACID/BARBITAL/VERONAL/
3018 3019	BENZENE BENZENE	399 338	1 44	-0.77 -1.85	0.62 A	C8H12N2O3 C8H12N2O3	5,5-DIETHYLBARBITURIC ACID/BARBITAL/YERONAL/ 5,5-DIETHYLBARBITURIC ACID/BARBITAL/YERONAL/
3020	I-PENT. ACETATE	399 399	1	0.58	0.43 0.62 A	C8H12N2O3 C8H12N2O3	5.5-DIETHYLBARBITURIC ACID/BARBITAL/VERONAL/ 5.5-DIETHYLBARBITURIC ACID/BARBITAL/VERONAL/
3021 3022	CCL4 N-HEPTANE	338	44	-2.15		Ç8H12N203	5.5-DIETHYLBARBITURIC ACID/BARBITAL/VERONAL/
3023 3024	DLEYL ALCOHOL SOWETHER+SOWDMF	82 125		0.14 -0.10	0.70 0.55	C8H12N2O3 C8H12N2O3	5.5-DIETHYLBARBITURIC ACID/BARBITAL/VERONAL/ 5.5-DIETHYLBARBITURIC ACID/BARBITAL/VERONAL/
3025	OCTANOL	80		1.73	1.73 =	C8H12G1	CYCLOHEXANOL, 1-ETHYNYL
3026 3027	DIETHYL ETHER CHCL3	112		0.29 0.76	0.37 A 1.30 N	C8H12O2 C8H12O2	CYCLOHEXANE-1,3-DIONE,5,5-DIMETHYL/OIMEDON/ CYCLOHEXANE-1,3-DIONE,5,5-DIMETHYL/OIMEDON/
3028 3029	OILS OCTANOL	347 298		1.42	2.48 A 3.99 =	C8H12O2 C8H12SI1	SORBIC ACID, ETHYL ESTER SILANE, DIMETHYL-PHENYL
3030	N-HEPTANE	400	14	-1.15		C8H13N102	AR ECOL IN
3031 3032	OCTANOL OCTANOL	348 218		~0.04 1.52	-0.04 = 1.52 =	C8H13N1O2 C8H13N1O2S1	N-PROPIONYLCYCLOBUTANECARBOXAMIDE 3.5-THIOMORPHOLINEDIONE, 2.2-DIETHYL
3033	OCTANOL	134		1.52	1.52 =	C8H14N4O1S1	3-ETHYLTHIO-4-AMINO-6-I-PR-1.2.4-TRIAZINE-5-ONE
3034 3035	OCTANOL OCTANOL	134 134		1.39 1.70	1.39 = 1.70 =	C8H14N4O1S1 C8H14N4O1S1	3-METHIO-4-AMINO-6-I-BU-1,2,4-TRIAZINE-5-ONE 3-METHIO-4-AMINO-6-T-BU-1,2,4-TRIAZINE-5-ONE
3036	CHCL3	285 255		2.97	4.20 A 0.55 =	C8H1402 C8H1403	6-METHYL-2,4-HEPTANEDIONE/I-VALERYLACETONE/ HEPTANDIC ACID: 6-KETD METHYL ESTER
3037 3038	OCTANOL Diethyl ether	212		0.55 0.67	0.70 A	C8H14O4	SUBERIC ACID
3039 3040	DIETHYL ETHER N-BUTANOL	194 194		0.47 0.92	0.54 A 0.80	C8H14O4 C8H14O4	SUBERIC ACID SUBERIC ACID
3041	ETHYL ACETATE	194		0.70	0.70	C8H14O4	SUBERIC ACID
3042 3043	CYCLOHEXANONE 2-BUTANONE	194 194		0.85 0.68	0.72	C8H14O4 C8H14O4	SUBERIC ACID Suberic acid
3044 3045	ME-I-BUT.KETONE OCTANOL	194 56		0.68 -0.29	0.74 -0.29 =	C8H14O4 C8H14O6	SUBERIC ACID TARTARIC ACID: DIETHYL ESTER
3046	DIETHYL ETHER	3		-0.19	-0.05 A	C8H1406	TARTARIC ACID. DIETHYL ESTER
3047 3048	DIETHYL ETHER I-DCTANOL	401 353		-0.35 -1.38	-0.19 A	C8H14O6 C8H15K1O2	TARTARIC ACID, DIETHYL ESTER POTASSIUM OCTANOATE
3049 3050	OCTANOL DIETHYL ETHER	260 3		0.67	0.67 = -0.28 B	C8H15N101 C8H15N101	2-AZACYCLONONANONE TROPINE
3051	I-BUTANOL	4		0.49	0.21	C8H15N1OL	TROPINE
30 5 2 30 5 3	CHCL3	67 67		-0.77 -0.84		C8H15N1O3 C8H15N1O3	D-ISOL EUCINE, ACETYL D-LEUCINE, ACETYL
3054	CHCL3	67		-0.70	1 66	C8H15N1O3	NORLEUCINE, ACETYL
3055 3056	OCTANOL OCTANOL	260 227		1.44 -1.45	1.44 = -1.45 =	C8H15N1S1 C8H15N3O7	2-AZACYCLONONANTHIONE STREPTOZOTOCIN (NCS 85998)
3057 3058	I-OCTANOL Paraffins	353 241		-1.38 -0.57		C8H15NA102 C8H16N251	SODIUM OCTANDATE N-AMYLETHYLENETHIOUREA
3059	N-HEPTANE	139	31	0.63		C8H16D2	OCTANDIC ACID
3060 3061	CHCL3 BENZENE	402 402	46 46	-0.92 -1.77		C8H17CL2N1O2 C8H17CL2N1O2	DI-I-PROPYLAMMONIUM-DICHLOROACETATE DI-I-PROPYLAMMONIUM-DICHLOROACETATE
3062 3063	I-BUTANOL XYLENE	4 46		1.99	2.29 2.61 B	C8H17N1 C8H17N1	2-PROPYLPIPERIDINE/CONIINE/ 2-PROPYLPIPERIDINE/CONIINE/
3064	OCTANOL	218		1.81	1.81 =	C8H17N101S1	PROPIONAMIDE, 2-BUTYLTHIO-2-METHYL
3065 3066	OILS CCL4	271 271		1.79 2.01	1.92 B 1.77 B	C8H18F103P1 C8H18F103P1	D18UTYLFLUOROPHOSPHATE D18UTYLFLUOROPHOSPHATE
3067	DIETHYL ETHER	378 5	44	-1.00	0.06 B	C8H18N2O2	N-METHYLCARBAMIC ACID, DIETHYLAMINDETHYL ESTER
3069	OCTANOL OILS	201		3.15	3.15 = 2.80 A	C8H18O1	OCTANOL OCTANOL
	DIETHYL ETHER DILS	2		0.04 -0.92		C8H18O3 C8H18O3	DIETHYLENE GLYCOL, MONOBUTYL ETHER DIETHYLENE GLYCOL, MONOBUTYL ETHER
3072	OILS	173		0.72	1.04 B	C8H18O4S2	2,2-BIS(ETHYLSULFONYL)BUTANE/TRIONAL/
3073 3074		168 214		0.65	0.97 B	C8H18O4S2 C8H18O4S2	2,2-BIS(ETHYLSULFONYL)BUTANE/TRIONAL/ 2,2-BIS(ETHYLSULFONYL)BUTANE/TRIONAL/
	DIETHYL ETFER I-BUTANOL	3		-2.62 -0.62	-2.18 A -1.38	C8H18O5 C8H18O5	TETRAETHYLENE GLYCOL TETRAETHYLENE GLYCOL
3077	DIETHYL ETHER	3		2.52	3.04 B	C8H19N1	DI-I-BUTYLAMINE
3078 3079	I-BUTANOL OCTANOL	4 218		2.38 2.68	2.84 2.68 ×	C8H19N1 C8H19N1	DI-I-BUTYLAMINE DIBUTYLAMINE
3080 3081	I-BUTANOL CCL4	135		2.35	2.90	C8H19N1 C8H19O2P1S2	OCTYLAMINE
3082	I-PENT. ACETATE	135		2.63 2.23	2.13	C8H19D2P1S2	PHOSPHORODITHIOTIC ACID.DI-I-BUTYL PHOSPHORODITHIOTIC ACID.DI-N-BUTYL
	CCL4 ME-I-BUT.KETONE	135 135		2.52 2.54	2.26 B 2.27	C8H19O2P1S2 C8H19O2P1S2	PHOSPHORODITHIOTIC ACID, DI-N-BUTYL PHOSPHORODITHIOTIC ACID, DI-N-BUTYL
30 6 5	OCTANOL	56		2.03	2.03 =	C8H1902S2	ETHYLPHOSPHONATE, O-ET-S-(2-ET-THIOETHYL)
3086 3087	CHCL3	236 50	17	1.04 0.24	1.44 A	C8H19O4P1 C8H19O4P1	DI-I-BUTYL PHOSPHATE DIBUTYL PHOSPHATE
3088 3089	CHCL3 Benzene	403 50		0.34 -0.42	1.53 A	C8H19O4P1 C8H19O4PI	OIBUTYL PHOSPHATE OIBUTYL PHOSPHATE
3090	BENZENE	404		-0.42	1.00 A	C8H19O4P1	DIBUTYL PHOSPHATE
	NITROBENZENE	404 50		-0.70 -0.14		C8H19O4P1 C8H19O4P1	DIBUTYL PHOSPHATE DIBUTYL PHOSPHATE
3093 3094		50 50		-1.44 -0.14	0.63 A	C8H19O4P1 C8H19O4P1	DIBUTYL PHOSPHATE DIBUTYL PHOSPHATE
3095	DI-BUTYL ETHER	236	17	1.18	,	C8H19O4P1	DIBUTYL PHOSPHATE
3096 3097	HEXANE	50 50		0.52 -2.34	1.15	C8H19O4P1 C8H19O4P1	DIBUTYL PHOSPHATE DIBUTYL PHOSPHATE
3098 3099	ME-I-BUT.KETONE S-PENTANOLS	50 274		1.36 2.21	1.19 .	C8H19O4P1 C8H19O4P1	DIBUTYL PHOSPHATE DIBUTYL PHOSPHATE
	PARAFFINS	50		-1.96		C8H1904P1	DIBUTYL PHOSPHATE

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NO.	SOLVENT	REF	FOOT	LOGP	LUGP	EMPIRICAL	NAME:
			NOTE	SOLV	DCT	FORMULA	
3101	PARAFFINS	404		-1.96		C8H19O4P1	DIBUTYL PHOSPHATE
3102	DIETHYL ETHER	236	17	1.62	•	CBH1904P1	OCTYL PHOSPHATE
3103 3104	ME-I-BUT-KETONE CHCL3	236 405		1.45	1.28	C8H19O4P1 C8H2OCL1N1	OCTYL PHOSPHATE TETRAETHYLAMMONIUM CHLORIDE
3105	OCTANOL	297	46	-2.82	-2.82 =	C8H2OIIN1	TETRAETHYLAMMONIUM IODIDE
3106	NITROBENZENE	92		-1.65		C8H2OIIN1	TETRAETHYLAMMONIUM IODIDE
3107 3108	I-BUTANOL OCTANOL	184 235		-1.14 2.85	2.85 =	C8H21N105 C9H4CL3N102S1	TETRAETHANOLAMMONIUM HYDROXIDE N={TRICHLOROMETHYLTHIO}PHTHALIMIDE/FOLPET/PHALTAN/
3109	OLEYL ALCOHOL	406		3.13	3.70	C9H4CL3N102S1	N-TRICLMETHIOPHTHALIHIDE/PHALTAN/
3110 3111	CYCLOHEXANE CHCL3	379 407	19 14	-1.15 1.58		C9H4F3N3 C9H5CL1I1N1O1	2-TRIFLUOROMETHYL-5-CYANO-BENZIMIDAZOLE 8-QUINOLINOL,5-CHLORO-7-1000
3112	HEXANE	299	17	0.58		C9H5CL1N4	CARBONYL CYANIDE, M-CHLORO-PHENYLHYDRAZONE
3113	CYCLOHEXANE	379	19	1.18		C9H5CL2F3N2	2-TRIFLUOROME-4,6-DICL-5-ME-BENZIMIDAZOLE 2-TRIFLUOROME-6-CL-5-ME-BENZIMIDAZOLE
3114 3115	CYCLOHEXANE OCTANOL	379 216	19	-0.07 2.73	2.73 =	C9H6CL1F3N2 C9H6CL1N1	6-CHLOROQUINOLINE
3116	GCTANOL	268		2.33	2.33 =	C9H6CL1N1	8-CHLOROQUINOLINE
3117 3118	CHCL3 OCTANOL	407 302		1.12	1.56 =	C9H6CL1N101 C9H6CL1N103	8-QUINOLINOL,5-CHLORG PHENDXYACETIC ACID,3-CYANO-4-CHLORG
3119	OCTANE	408		2.63	_	C9H6N1S1	QUINOLINE, 5-BROMO, 8-MERCAPTO
3120 3121	OCTANOL OCTANOL	216 216		1.86 1.84	1.86 = 1.84 =	C9H6N2O2 C9H6N2O2	5-NITROQUINOLINE 6-NITROQUINOLINE
3122	OCTANOL	216		1.82	1.82 =	C9H6N2O2	7-NITROQUINOLINE
3123	OCTANOL	216		1.40	1.40 =		8-NITROQUINOLINE
3124 3125	HEXANE OCTANOL	299 218		0.21 1.39	1,39 =	C9H6N <del>4</del> C9H6O2	CARBONYL CYANIDE, PHENYLHYDRAZONE COUMARIN
3126	CYCLOHEXANE	304		0.48		C9H602	COUMARIN
3127 3128	OILS OCTANOL	173 218		1.21 0.61	1.42 B 0.61 =	C9H6O2	COUMARIN 1.3-INDANDIONE
3129	OCTANOL	409		0.36	0.36 *		1,3-INDANEDIONE
3130	CYCLOHEXANE	304		-0.12	1.03 A	C9H6O2 C9H6O6	1,3-INCANEDIONE BENZENE,1,3,5-TRICARBOXYLIC ACID
3131 3132	DIETHYL ETFER I-BUTANOL	3 4		1.04	1.57	C9H6Q6	BENZENE, 1, 3, 5-TRICARBOXYLIC ACID
3133	CYCLOHEXANE	141		2.46	1 67 -	C9H7CL1N2O4	STYRENE, Z-CHLORO, 5-NITRO, B-NITRO, B-METHYL PHENOXYACETIC ACID, 3-CARBOXY-4-CHLORO
3134 3135	OCTANUL CYCLOHEXANE	302 141		1.07 3.36	1.07 =	C9H7CL105 C9H7CL2N102	STYRENE, 3, 4-DICHLORO, B-NITRO, B-METHYL
3136	CYCLOHEXANE	141		4.40		C9H7CL2N102	STYRENE, 2, 6-DICHLORD, B-NITRO, B-HETHYL
3137 3138	CYCLOHEXANE CYCLOHEXANE	141 379	10	3.61 -0.48		C9H7CL2N2O2 C9H7F3N2	STYRENE, 2, 4-DICHLORO, B-NITRO, B-METHYL 2-TRIFLUOROME-5-METHYL BENZIMIDAZOLE
3139	OCTANOL	10	• •	2.62	2.62 =	C9H7F302	M-TRIFLUOROMETHYLPHENYLACETIC ACID
3140 3141	OCTANOL CYCLOHEXANONE	10 302		2.36 3.42	2.36 =	C9H7F303 C9H7F303	M-TRIFLUORGMETHYLPHENO XYACETIC ACID M-TRIFLUORGMETHYLPHENO XYACETIC ACID
3142	CYCLOHEXANOL	302		2.72		C9H7F3O3	M-TRIFLUOROMETHYLPHENDXYACETIC ACID
3143	OCTANOL	10		2.86	2.86 = 2.48 =		M-TRIFLUOROMETHYLTHIOPHENOXYACETIC ACID M-TRIFLUOROMETHOXYPHENOXYACETIC ACID
3144 3145	OCTANOL OCTANOL	10		2.48 2.19	2.19 =	C9H7F305S1	M-TRIFLUOROMETHYLSULFONYLPHENOXYACETIC ACID
3146	CYCLOHEXANE	141		1.53		C9H7N1	CINNAMONITRILE
3147 3148	OCTANOL OCTANOL	255 309		2.03 2.06	2.03 = 2.06 =	C9H7N1 C9H7N1	QUINOLINE QUINOLINE
3149	CYCLOHEXANE	280		1.26		C9H7N1	QU INOL INE
3150 3151	XYLENE OCTANOL	46 186		1.14	1.81 B 2.08 =	C9H7N1 C9H7N1	OU I NOL I NE I – QUINOL I NE
3152	CYCLOHEXANE	280		1.11		C9H7N1	I-QUINOLINE
3153 3154	DCTANOL DCTANOL	65 410		1.26 1.96	1.26 = 1.96 =	C9H7N1O1 C9H7N1O1	2-QUINGLINGL 8-QUINGLINGL
3155	OCTANOL	349		2.02	2.02 =	C9H7N101	8-QUINOLINOL
3156	CHCL3	411		2.60 2.64	1.90 B 2.06 B	C9H7N101 C9H7N101	8-QUINOLINOL 8-QUINOLINOL
3157 3158	CHCL3 N-BUTANOL	412 410		1.67	1.81	C9H7N101	8-QUINOLINOL
3159	TOLUENE	410		2.21	2.26 B	C9H7N1O1 C9H7N1O1	8-QUINOLINOL 8-QUINOLINOL
3160 3161	PRIM. PENTANOLS I-PENT. ACETATE	410 410		1.79 2.24	1.96 2.14	C9H7N1O1	8- QU INOL INOL
3162	CCL4	412		2.06	1.89 B	C9H7N1O1	8-QUINOLINOL
3163 3164	ME-I-BUT.KETONE O-DICL. BENZENE	410 410		2.13 2.48	1.90	C9H7N1O1 C9H7N1O1	8-QUINCLINOL 8-QUINCLINOL
3165	OCTANOL	10		1.18	1.18 =	C9H7N1 02	M-CYANOPHENYLPHENYLACETIC ACIO
3166 3167	CYCLOHEXANE OCTANOL	304 10		0.67 0.93	0.03 =	C9H7N1O2 C9H7N1O3	PHTHALIMIDE, N-METHYL PHENDXYACETIC ACID, 4-CYANO
3168	OCTANOL	10		0.95	0.95 =	C9H7N1O3	PHENOXYACETIC ACID+3-CYANO
3169	CYCLOHEXANE	141		1.41	1.94 B	C9H7N1O4 C9H7N1SI	STYRENE, 3, 4-DIOXYMETHYLENE, B-NITRO 8-QUINOLINETHIOL
3170 3171	BENZENE	413		2.20	2.08 B	C9H7N1S1	8-QUINOLINETHIOL
3172	CCL4	413		1.91	1.76 B	C9H7N1S1 C9H7N1S1	8-QUINOLINETHIOL 8-QUINOLINETHIOL
3173 3174		413 283		2.92	2,92 =	СЭНВ	INDENE
3175	CYCLOHEXANE	141		3.01		C9H8BR1N102 C9H8BR1N102	STYRENE, 2-BROMO, B-NITRO, B-METHYL STYRENE, 3-BROMO, B-NITRO, B-METHYL
3176 3177	CYCLOHEXANE CYCLOHEXANE	141		3.05 2.63		C9H8CL1N102	STYRENE, 3-CHLORO, B-NITRO, B-METHYL
3178	CYCLOHEXANE	141		2.97		C9H8CL1N102	STYRENE,4-CHLORO,8-NITRO,8-METHYL STYRENE,2-CHLORO,8-NITRO,8-METHYL
3179 3180	CYCLOHEXANE OCTANOL	235		3.31 2.35	2.35 =	C9H8CL1N102 C9H8CL3N102S1	CAPTAN
3181	OLEYL ALCOHOL	406		2.15	2.72	C9H8CL3N102S1	N-(TRICLMETHIO)-TETRAHYDROPHTHALIMIDE/CAPTAN/
3182 3183	OLEYL ALCOHOL	406 406		1.65 0.85	2.22 1.42	C9H8CL3N103S1 C9H8CL3N103S1	N-TRICHLMETHIO-3,6-ENDOXOMEXAHYDROPHTHALIMIDE N-TRICLMETHIO-4,5-EPOXYHEXAHYDROPHTHALIMIDE
3184	CYCLOHEXANE	141		2.47	••••	C9H8F1N102	STYRENE, 4-FLUORO, B-NITRO, B-METHYL
3185 3186	CYCLOHEXANE CYCLOHEXANE	141 141		2.57 2.67		C9H8F1N102 C9H8F1N102	STYRENE,3-FLUORO,B-NITRO,B-METHYL STYRENE,2-FLUORO,B-NITRO,B-HETHYL
3187	OCTANOL	384		2.37	2.37 =	C9H8F3N102	N-METHYL-3-TRIFLUOROMETHYLPHENYLCAR8AMATE
3188	DILS	382 382		3.99 2.30	4.82 A	C9H8I2O3 C9H8I2O4	BENZOIC ACID, 4-OH, 3,5-DI-IOOO, ETHYL ESTER BENZOIC ACID, 3,5-DI-IODO, 4-OH, B-HYDROXYETHYL ESTER
3189 3190	OILS OCTANOL	216		1.16	1.16 =	C9H8N2	5-AMINOQUINOLINE
3191	OCTANOL	216 314		1.79 -1.78	1.79 *	C9H8N2 C9H8N2	8-AMINOQUINOLINE Q-PHENYLENEDIAMINE
3192 3193	HEXADECANE DECANE	314		-1.78		C9H8N2	O-PHENYLENEDIAHINE
3194	CYCLOHEXANE	280		1.28 1.11	1.11 =	C9H8N2 C9H8N2O2	QUINGLINE, 3-AMINO N-METHYL-2-CYANOPHENYL CARBAMATE
3195 3196	OCTANOL OCTANOL	384 384		0.97	0.97 =	C9H8N2O2	N-METHYL-3-CYANOPHENYL CARBAMATE
3197 3198	OCTANOL OCTANOL	384 216		0.95 0.36	0.95 = 0.36 =		N-METHYL-4-CYANOPHENYLCARBAMATE 8-SULFONAMIDOQUINOLINE
3199	CYCLOHEXANE	141		1.52	V.30 3	C9H8N2O4	STYRENE, 2-NITRO, B-NITRO, B-METHYL
3200	CYCLOHEXANE	141		1.59		C9H8N2 04	STYRENE, 4-NITRO, 8-NITRO, 8-METHYL

NC.	SOLVENT	REF	FOOT Note	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
			Nuic	30.7			The state of the s
3201	CYCLOHEXANE	141		1.62	1.88 =	C9H8N2O4 C9H8O1	STYRENE, 3-NITRO, B-NITRO, B-METHYL ACRYLOPHENONE
3202 3203	OCTANOL CYCLOHEXANE	238 304		1.88	1.00 -	C9H801	1-INDANONE
3204	OCTANOL	218		2.13	2.13 =	C9H8O2	CINNAMIC ACID/TRANS/ CINNAMIC ACID/TRANS
3205 3206	CHCL 3	149 29	12	1.20	2.31 A 3.01 A	C9H8O2 C9H8O2	CINNAMIC ACID/TRANS/
3207	XYLENE	46		0.15	1.97 A	C9H802	CINNAMIC ACID/TRANS/
3208 3209	TOLUENE ME-I-BUT.KETONE	29 149	12	1.60 2.33	2.98 A 2.08	C9H8O2 C9H8O2	CINNAMIC ACID/TRANS/ CINNAMIC ACID/TRANS/
3210	OCTANDL	268		3.25	3.25 =	C9H8D251	5.7-DIMETHYL-2-OXO-1.3-BENZOXATHIOL
3211	OCTANOL OCTANOL	186		1.23	1.23 = 1.19 =	C9H8O4 C9H8O4	ACETYLSALICYLIC ACID/ASPIRIN/ ACETYLSALICYLIC ACID/ASPIRIN/
3212 3213	DIETHYL ETHER	218 46		1.15	1.13 A	C9H804	ACETYLSALICYLIC ACID/ASPIRIN/
3214	CHCL3	29		0.26	1.45 A	C9H804	ACETYLSALICYLIC ACID/ASPIRIN/ ACETYLSALICYLIC ACID/ASPIRIN/
3215 3216	CHCL3 XYLENE	254 46		0.30 -0.57	1.46 A 1.16 A	C9H8O4 C9H8O4	ACETYLSALICYLIC ACID/ASPIRIN/
3217	TOLUENE	29		-0.49	1.12 A	C9H8O4	ACETYLSALICYLIC ACID/ASPIRIN/ ACETYLSALICYLIC ACID/ASPIRIN/
3218 3219	N-HEPTANE OCTANOL	254 10		-1.52 1.14	1.14 =	C9H8O4 C9H8O4	M-CARBOXYPHENYLACETIC ACIO
3220	DIETHYL ETHER	414		0.40	0.46 A	C9H804	HOMOPHTHALIC ACID ISOPHTHALIC ACID, METHYL ESTER
3221 3222	OCTANOL OCTANOL	10 10		1.83	1.83 *	C9H8O4 C9H8O5	PHENOXYACETIC ACID, M-CARBUXY
3223	CYCLOHEXANOL	302		1.75		C9H8O5	PHENOXYACETIC ACID, M-CARBOXY
3224	OCTANOL OCTANOL	255 302		1.72	1.72 = 1.66 =	C9H9N1 C9H9N1	BENZYLACETONITRILE BENZYLACETONITRILE
3225 3226	OCTANOL OCTANOL	309		2.60	2.60 =	C9H9N1	INDOLE, 3-METHYL
3227	OCTANOL	309		2.68	2.68 =	C9H9N1 C9H9N101	INDOLE, 5-METHYL CINNAMAMIDE
3228 3229	CYCLOHEXANE OCTANOL	304 141		-2.21 2.52	2.52 =	C9H9N102	STYRENE, B-METHYL-8-NITRO
3230	CYCLOHEXANE	141		2.69		C9H9N1 02	STYRENE, B-METHYL-B-NITRO STYRENE, 4-METHYL-B-NITRO
3231 3232	OCTANOL CYCLOHEXANE	141		2.28 2.40	2.28 =	C9H9N102 C9H9N102	STYRENE, 2-METHYL, 8-NITRO
3233	CYCLOHEXANE	141		2.42		C9H9N1 02	STYRENE, 4-METHYL, B-NITRO
3234	OCTANOL	56		1.88 -0.41	1.88 = -0.25 A	C9H9N103	O-AMINOBENZOIC ACIO,N-ACETYL GLYCINE,N-BENZOYL/HIPPURIC ACID/
3235 3236	DIETHYL ETHER DIETHYL ETHER	3 46		-0.22	-0.07 A	C9H9N1O3	GLYCINE.N-BENZOYL /HIPPURIC ACID/
3237	OCT ANDL	141		2.30	2.30 =	C9H9N1 03	STYRENE, 3-METHOXY-B-NITRO STYRENE, 4-METHOXY, B-NITRO
3238 3239	CYCLOHEXANE	141		1.73 1.89		C9H9N1O3	STYRENE, 3-METHOXY, 8-NITRO
3240	CYCLOHEXANE	141		2.15		C9H9N1O3	STYRENE, 2-METHOXY, B-NITRO
3241 3242	OCTANOL CYCLOHEXANE	141		1.88 0.04	1.88 =	C9H9N1O4 C9H9N1O4	STYRENE, 4-HYDROXY-3-METHOXY-B-NITRO STYRENE, 4-HYDROXY, 3-METHOXY, B-NITRO
3243	OCTANOL	393	63	0.35	0.35 =	C9H9N3D252	SULFATHIAZOLE
3244	OCTANOL STLED	56 342		0.05	0.05 = 0.21 B	C9H9N302S2 C9H9N302S2	SULFATHIAZOLE SULFATHIAZOLE
3245 3246	DIETHYL ETHER DIETHYL ETHER	113		-0.99	-0.03 8	C9H9N3D2S2	SULFATHIAZOLE
3247	CHCL3	343		-0.82 -0.75	-0.16 N	C9H9N3O2S2 C9H9N3O2S2	SULFATHIAZOLE SULFATHIAZOLE
3248 3249	CHCL3	113 326		-0.87	-0.21 N	C9H9N302S2	SULFATHIAZOLE
3250	CHCL3	344		-0.80	-0.14 N -0.68 N	C9H9N3O2\$2	SULFATHIAZOLE SULFATHIAZOLE
3251 3252	CHCL3 CHCL3	393 415		-0.73 -0.74	-0.08 N	C9H9N3O2S2 C9H9N3O2S2	SULFATHIAZOLE
3253	BENZENE	343		-0.96	0.43 A	C9H9N3D2S2	SULFATHIAZOLE
3254 3255	I-PENT. ACETATE	343 343		-0.28 -1.57	-0.47 0.54 A	C9H9N3U2S2 C9H9N3U2S2	SULFATHIAZOLE SULFATHIAZOLE
3256	N-FEPTANE	415	44	-4.60	2 22	C9H9N3O2S2	SULFATHIAZOLE
3257 3258	OCTANOL OCTANOL	235		3.23 3.35	3.23 ≖ 3.35 ≖	C9H10 C9H10	ALLYLBENZENE 1-propene, 1-phenyl
3259	HEXANE	391	L	0.58		C9H10CL1N102	N-METHYL CARBAMATE, 3-METHYL, 4-CHLOROPHENYL
3260 3261	OCTANOL N-HEPTANE	384 416		2.57 0.49	2.57 =	C9H10CL1N102 C9H10CL1N103	N-METHYL-3-METHYL-4-CHLOROPHENYLCARBAMATE P-AMINOSALICYLIC ACID:2-CHLOROETHYL ESTER
3262	OLEYL ALCOHOL	406	•	2.40	2.97	C9H10CL3N102S1	N-TRICLMETHICHEXAHYDROPHTHALIMIDE
3263 3264	CHCL3 CCL4	306 306		0.48 -1.40	1.60 A 0.65 A	C9H10I1N1O4S1 C9H10I1N1O4S1	N-(P-IODOBENZENESULFONYL)ALANINE N-(P-IODOBENZENESULFONYL)ALANINE
3265	CLCHZCHZCL	306		0.74		C9H10 I 1N1 04S1	N- (P-LODOBENZENE SUL FON YL ) ALANINE
3266	DIETHYL ETHER	306		0.62	0.70 A	C9H10I1N105S1	N-(P-1000BENZENESULFONYL)SERINE N-(P-1000BENZENESULFONYL)SERINE
3267 3268	CHCL3 ETHYL ACETATE	306 306		-1.30 1.34	1.49 A	C9H1011N105S1 C9H1011N105S1	N- (P-1000BENZENESULFONYL) SERINE
3269	CL CH2CH2CL	306		-0.82	2 25 -	C9H1011N105S1	N-(P+IODOBENZENESULFONYL)SERINE
3270 · 3271	OCTANOL OCTANOL	206		2.35 0.26	2.35 = 0.26 =	C9H10N2 C9H10N204	BENZIMIDAZOLE,5,6-DIMETHYL PHENOXYACETIC ACID,3-UREIDO
3272	OCTANOL	56	•	0.54	0.54 =	C9H10N402S2	SULFAMETHIZOLE
3273 3274	CHCL3 CHCL3	343 415		-0.05 -0.43	0.53 N 0.21 N	C9H10N402S2 C9H10N402S2	SULFAMETHIZOLE SULFAMETHIZOLE
3275	BENZENE	343	2	-1.77	-Q.36 A	C9H10N402\$2	SULFAMETHIZOLE
3276 3277	[-PENT. ACETATE	343 343		0.34 -1.82	0.18 0.33 A	C9H10N402S2 C9H10N402S2	SULFAMETHIZOLE SULFAMETHIZOLE
3278		415	44	-3.83		C9H10N4D2S2	SULFAMETHIZOLE
3279		218 56		2.94 1.95	2.94 = 1.95 =		ALLYLPHENYL ETHER CINNAMYL ALCOHOL
3280 3281	CYCLOHEXANE	325		0.61	1177 -	C9H1001	4 INDANOL
3282	CYCLOHEXANE	325		0.48		C9H1001	5-INDANOL
3283 3284		255 255		1.44	1.96 =	C9H1001 C9H1002	Z-PROPANONE,1-PHENYL ACETIC ACID,BENZYL ESTER
3285	CHCL3	254	•	0.71		C9H10O2	P-HYDROXYPROP10PHENONE
3286 3287		254 10		-0.92 1.95	1.95 =	C9H10O2 C9H10O2	P-HYDROXYPROPIOPHENONE M-HETHYLPHENYLACETIC ACID
3268	BCTANGL	10	)	1.86	1.86 =	C9H10O2	P-METHYLPHENYLACETIC ACID
3289 3290	OCTANOL OILS	255 362		1.83	1.83 = 1.68 A	C9H10O2 C9H10O2	PHENYLACETIC ACID, METHYL ESTER A-PHENYLPROPIONIC ACID
3291	OILS	385	i	0.75	1.91 A	C9H10O2	A-PHENYLPROPIONIC ACID
3292 3293	DCTANDL CHCL3	255 46		1.84		C9H10O2 C9H10O2	B-PHENYLPROPIONIC ACID B-PHENYLPROPIONIC ACID
3294	OILS	361		0.72	1.91 A	C9H10 02	B-PHENYLPROPIONIC ACID
3295	OILS	417 46		0.82	1.92 A 2.29 A	C9H10 02	8-PHENYLPROPIONIC ACID B-PHENYLPROPIONIC ACID
3296 3297	XYLENE Diethyl ether	248		1.34	1.29 A	C9H10O3	BENZALDEHYDE, 3-ETHOXY-4-HYDROXY/ETHYL VANILLIN/ BENZALDEHYDE, 3-ETHOXY-4-HYDROXY/ETHYL VANILLIN/
3298 3299	CYCLOHEXANE BENZENE	248 248		0.03	2.81 A	C9H10O3 C9H10O3	BENZAL CEHYDE. 3-ETHOXY-4-HYDROXY/ETHYL VANILLIN/ BENZAL DEHYDE. 3-ETHOXY-4-HYDROXY/ETHYL VANILLIN/
3300	CFCH5CH5CF	248		1.86	***** ¥	C9H10O3	BENZAL DEHYDE, 3-ETHOXY-4-HYDROXY/ETHYL VANILLIN/

NO.	SOLVENT	REF	FOOT NOTE		LOGP OCT	EMPIRICAL FORMULA	NAME
	********			2 .7	2 47 -	C9H10O3	P-HYDROXYBENZOIC ACID, ETHYL ESTER
3301 3302	OCTANOL OCTANOL	56 10		2.47 1.50	2.47 = 1.50 =	C9H10O3	M-METHOXYPHENYLACETIC ACID
3303	OCTANOL	10		1.42	1.42 =	C9H10O3	P-METHOXYPHENYLACETIC ACID
3304	OILS	383		0.45	1.63 A	C9H10O3	P-METHOXYPHENYLACETIC ACID M-METHYLPHENOXYACETIC ACID
3305	OCTANOL OCTANOL	10 10		1.78 2.10	1.78 = 2.10 =	C9H10O3 C9H10O3	O-METHYLPHENOXYACETIC ACID
3306 33(7	OCTANOL	268	19	1.86	1.86 =	C9H10O3	P-METHYLPHENOXYACETIC ACID
3308	CYCLOHEXANONE	302		2.46	2.46 =	C9H10D3	P-METHYLPHENOXYACETIC ACID
3309	CYCLOHEXANOL	302		2.05	2.05 =	C9H10O3	P-METHYLPHENOXYACETIC ACID PHENOXYACETIC ACID, 3-METHYLTHIO
33 10 33 11	OCTANOL OILS	10 173		1.90	1.90 = 1.98 A	C9H1003S1 C9H1004	GLYCOL SALICYLATE
3312	OCTANOL	10		0.93	0.93 =	C9H10D4	PHENDXYACETIC ACID+2-METHOXY
3313	OCTANOL	10		1.23	1.23 =		PHENOXYACETIC ACID,4-METHOXY PHENOXYACETIC ACID,3-METHOXY
3314	CYCLOUSYANONS	10 302		1.38 2.40	1.30 =	C9H10O4 C9H10O4	PHENOXYACETIC ACID, 3-METHOXY
3315 3316	CYCLOHEXANONE CYCLOHEXANOL	302		1.80		C9H10O4	PHENDXYACETIC ACID, 3-HETHOXY
3317	OCTANOL	10		0.06		C9H10O4S1	M-METHYLSULFONYLPHENYLACETIC ACID
3318	DIETHYL ETPER	323		1.07 0.01	1.05 A 0.01 =	C9H10D5 C9H10D5S1	BENZOIC ACID, 4-HYDROXY, 3,5-DIMETHOXY (ME-SYRINGATE) PHENOXYACETIC ACID, M-METHYLSULFONYL
3319 3320	OCTANOL CYCLOHEXANOL	10 302		0.88	0.01	C9H10O5S1	PHENOXYACETIC ACID, M-METHYL SULFONYL
3321	OCTANOL	255		3.72	3.72 =		PROPYLBROWIDE, G-PHENYL
3322	OCTANOL	255		3.55	3.55 =	C9H11CL1 C9H11CL3N1O3P1	PROPYLCHLORIDE.G-PHENYL ETHYLPHOSPHORAMIDATE.O-ME.O-(2,4,5-TRICLPHENYL)
3323 3324	HEXANE OCTANDL	391 255		1.41 2.95	2.95 =	C9H11F1	PROPYL FLUOR I DE + G-PHENYL
33 25	OCTANOL	226		-1.38	-1.38 =	C9H11F1N2O5	2'-DEGXY-5-FLUGROURIDINE (27640)
3326	OCTANOL	56		3.90	3.90 =	C9H1111	PROPYL IODIDE, G-PHENYL
3327	BENZENE	72 255		0.18 0.91	1.55 A 0.91 =	C9H11N1O1 C9H11N1O1	O-ACETAMIDOTOLUENE PROPIONAMIDE, 3-PHENYL
3328 3329	OCTANOL OILS	173		-0.20	1.01 A	C9H11N102	ACETANILIDE, P-METHOXY/METHACETIN/
3330	OILS	224		0.30	1.47 A	C9H11N1O2	ACETANILIDE, P-METHOXY/METHACETIN/
3331	OCTANOL	349	•	2.57 2.50		C9H11N102 C9H11N102	O-AMINOBENZOIC ACID, ETHYL ESTER P-AMINOBENZOIC ACID, ETHYL ESTER
3332 3333	I-PENT. ACETATE OLEYL ALCOHOL	418 390	3 44	1.61	2.41 2.15	C9H11N102	P-AMINGBENZOIC ACID, ETHYL ESTER
3334	OCTANOL	186		2.30	2.30 =	C9H11NL02	ETHYLCARBAMATE.N-PHENYL
3335	OILS	173		1.99		C9H11N102	ETHYLCARBAMATE, N-PHENYL
3336	OILS	224 276		2.18 0.98	3.26 A 0.98 =	C9H11N102 C9H11N102	ETHYLCARBAMATE,N-PHENYL O-METHOXYACETANILIDE
3337 3338	OCTANOL .	276		1.14	1.14 =	C9H11N1O2	P-METHOXYACETANILIDE
3339	HEXANE	391		0.04		C9H11N102	N-HETHYL CARBAMATE, 3-METHYLPHENYL
3340	OCTANOL	384 384		1.70	1.70 = 1.46 =	C9H11N1O2 C9H11N1O2	N-METHYL-M-TOLYLCARBAMATE N-METHYL-O-TOLYLCARBAMATE
3341 3342	OCTANOL OCTANOL	384		1.46 1.66	1.66 =	C9H11N102	N-METHYL-P-TOLYLCARBAMATE
3343	OCTANOL	56		-1.43	-1.43 =	C9H11N102	PHENYLALANINE, OL
3344	OCTANOL	384		1.92	1.92 =	C9H11N102S1	N-METHYL-4-METHYLTHIOPHENYLCARBAMATE P-AMINOSALICYLIC ACID.ETHYL ESTER
3345	N-HEPTANE Octanol	370 384	14	0.98 0.81	0.81 =	C9H11N1O3 C9H11N1O3	N-METHYL-2-METHOXYPHENYLCARBAMATE
3346 3347	OCTANOL	384		1.30		C9H11N1O3	N-METHYL-3-METHOXYPHENYLCARBAMATE
3348	OCTANOL	384		1.20	1.20 =		N-METHYL-4-METHOXYPHENYL CARBAMATE
3349	OCTANOL	56 370		-2.26 -0.82	-2.26 =	C9H11N103 C9H11N104	TYROSINE, L P-AMINOSALICYLIC ACID, 2-HYDROXYETHYL ESTER
3350 3351	N-HEPTANE OCTANOL	56		3.66	3.66 =	C9H12	ISOPROPYLBENZENE
3352	OCTANOL	298		3.66	3.66 =	C9H12	IS OPROPYL BENZENE
3353	OCTANOL	255 218		3.68 3.57	3.68 = 3.57 =	C9H12	PROPYL BENZENE PROPYL BENZENE
3354 3355	OCTANOL BENZENE	311		-1.15	3431 =	C9H1281N104	PHENYLBORONIC ACID, M-ETHOXYACETAMIDO
3356	BENZENE	311		-2.41		C9H12B1N104	PHENYLBORONIC ACID, P-B-ALANINYL
3357	CHCL3 N-HEPTANE	396 396		2.31 0.96	1.75 8	C9H12CL1N1 C9H12CL1N1	4-CHLOROAMPHETAMINE 4-CHLOROAMPHETAMINE
3358 3359	N-BUTANOL	295		0.00	-0.51	C9H12CL1N102	PHENYLALANINE HYDROCHLORIDE
3360	N-BUTANOL	295		-0.25	-0.86	C9H12CL1N1Q3	TRYROSINE HYDROCHLORIDE
3361	OCTANOL	341 186		0.17 0.98	0.17 =	C9H12N2 C9H12N201	NORNICOTINE UREA, 1, 1-DIMETHYL-3-PHENYL
3362 3363	DCTANOL DCTANOL	218		1.02	1.02 =	C9H12N2Q1	UREA-1-3-DIMETHYL PHENYL
3364	N-HEPTANE	419		-2.52		C9H12N2O1	UREA, ETHYLPHENYL-
3365	N-HEPTANE	419		-2.16		C9H12N2O1 C9H12N2O1	UREA, METHYL, M-TOLYL- UREA, METHYL, D-TOLYL-
3366 3367	N-FEPTANE N-HEPTANE	419 419		-1.85 -1.89		C9H12N2O1	UREA, METHYL, P-TOLYL-
3368	CHCL3	399	1	2.49		C9H12N2G2S1	BARBITURIC ACID, 5-ALLYL, 5-ETHYL, 2-THIO
3369	I-PENT. ACETATE	399		2.92	2.85 3.02 A	C9H12N2O2S1	BARBITURIC ACID, 5-ALLYL, 5-ETHYL, 2-THIO BARBITURIC ACID, 5-ALLYL, 5-ETHYL, 2-THIO
3370 3371	CCL4 OCTANOL	399 399		1.36	0.95 *	C9H12N2O2S1 C9H12N2O3	BARBITURIC ACID, 5-ALLYL, 5-ETHYL
3372	CHCL 3	399	1	0.12	0.69 N	C9H12N2O3	BARBITURIC ACID, 5-ALLYL, 5-ETHYL
3373	BENZENE	399		-0.51	0.87 A	C9H12N2O3	BARBITURIC ACID, 5-ALLYL-5-ETHYL BARBITURIC ACID, 5-ALLYL, 5-ETHYL
3374 3375	I-PENT. ACETATE CCL4	399 399		0.98 -1.20	0.84 0.84 A	C9H12N2O3 C9H12N2O3	BARBITURIC ACID, 5-ALLYL, 5-ETHYL
3376	N-BUTANOL	420	37	-0.80	-1.62	C9H12N2O6	URIDINE
3377	N-BUTANOL	253		-0.92	-1.79	C9H12N2O6	URIDINE 8-HETHOXYCAFFEINE
3378 3379	CCL4 Cyclohexane	234 132		0.74 0.89		C9H12N4O3 C9H12O1	PHENOL,5-ETHYL,3-METHYL
3380		325		0.73		C9H12O1	PHENOL, 5-ETHYL, 3-METHYL
3381	CYCLOHEXANE	325		0.74		C9H1201	PHENOL . 3-ETHYL . 4-METHYL
3382	CYCLOHEXANE CYCLOHEXANE	325 325		0.97 1.01		C9H12O1 C9H12O1	PHENOL,3-ETHYL,2-METHYL PHENOL,4-ETHYL,2-METHYL
3383 3384	CYCLOHEXANE	325		1.02		C9H12O1	PHENOL, 5-ETHYL, 2-METHYL
3385	CYCLOHEXANE	325	i '	1.06		Ç9H12Q1	PHENOL, 2-ETHYL, 5-METHYL
3386	OCTANOL HEXANE	255 372		1.88 0.08	1.88 =	C9H12O1 C9H12O1	PROPANOL, 3-PHENYL PROPANOL, 3-PHENYL
3387 3388	CYCLOHEXANE	325		0.83		C9H12O1	M-PROPYL PHENOL
3389	CYCLOHEXANE	325	i	1.18		C9H12O1	O-PROPYL PHENOL
3390	CYCLOHEXANE	133		1.08		C9H12O1 C9H12O1	O- I-PROPYL PHENOL P-PROPYL PHENOL
3391 3392		325 325		0.86 0.77		C9H12O1	P-I-PROPYLPHENOL
3393	CYCLOHEXANE	133	i	0.81		C9H12O1	P-I-PROPYLPHENOL
3394	CYCLOHEXANE	325	i	0.97		C9H12O1 C9H12O1	2, 3, 5-TRIMETHYLPHENOL 2, 4, 5-TRIMETHYLPHENOL
3395 3396	CYCLOHEXANE CYCLOHEXANE	325 325		0.94 1.24		C9H12O1	2.4.6-TRIMETHYLPHENOL
3397	CYCLOHEXANE	325	í	0.63		C9H12O1	3, 4, 5-TRIMETHYLPHENOL
3398	DIETHYL ETHER	332		2.37	2.29 A	C9H12O2 C9H12O2	BENZENE, 1, 2-DIHYDROXY-4-PROPYL BENZENE, 1, 2-DIHYDROXY, 4-PROPYL
3399 3400	DI-BUTYL ETHER DI-I-PR. ETHER	332 332		2.03	2.94	C9H12O2	BENZENE, 1, 2-DIHYDROXY, 4-PROPYL

NO.	SOLVENT	REF	FOOT NOTE		LOGP OCT	EMPIRICAL FORMULA	NAME
							DEMETHING COLET ACCOL
3401	DIETHYL ETHER DILS	323 327		-1.17 1.78	-0.91 A 2.80 A	C9H12O2 C9H12O2	DIMETHYLGUAIACOL PHENOL,2-METHOXY-4-ETHYL/P-ETHYLGUAIACOL//
3402 3403	PARAFFINS	327		1.20		C9H12O2	PHENOL.2-METHOXY-4-ETHYL/P-ETHYLGUAIACOL/
3404	OCTANOL	238		1.53	1.53 =		BENZENE, 1, 2, 3-TRINETHOXY
3405	DILS	327		1.04	2.13 A	C9H12O3 C9H12O3	PHENOL, 2,6-DIMETHOXY-4-METHYL PHENOL, 2,6-DIMETHOXY-4-METHYL
3406 3407	PARAFFINS OCTANOL	327 238		0.70	0.70 =		PHENYL GLYCEROL
3408	DIETHYL ETHER	323		-0.45	-0.28 A	C9H12O4	BENZYLALCOHOL. 3. 5-DIMETHOXY-4-HYDROXY/SYRINGYL ALCOHOL/
3409	BENZENE	311	6	0.35		C9H13B102	PHENYL BORONIC ACID, 2,4,6-TRIMETHYL
3410	OCTANOL CHCL3	373 396		-1.43 2.17	-1.43 = 1.63 B	C9H13CL1N2O1 C9H13N1	NI-PROPYLNICOTINAMIDE CHLORIDE AMPHETAMINE
3411 3412	N-HEPTANE	138		0.53	1.05 0	C9H13N1	ANPHETAMINE
3413	N-HEPTANE	396		0.28		C9H13N1	AMPHETAMINE
3414	N-HEPTANE	421		1.57		C9H13N1	BENZYLDIMETHYLAMINE BENZYLETHYLAMINE
3415 3416	DIETHYL ETHER DIETHYL ETHER	46 374		1.08	1.82 B 1.92 B	C9H13N1 C9H13N1	BENZYL ETHYLAHINE
3417	XYLENE	46		1.72	2.37 B	C9H13N1	BENZYLETHYLAHINE
3418	XYLENE	422		0.96	1.60 B	C9H13N1	ETHYL AMINE, 1-METHYL, 2-PHENYL PHENYL-1-PROPYLAMINE
3419	DIETHYL ETFER	374 255		1.08	1.80 B 1.83 =	C9H13N1 C9H13N1	PROPYLAMINE, 3-PHENYL
3420 3421	OCTANOL OCTANOL	312		2.45	2.45 =	C9H13N1	N-PROPYLANILINE
3422	CYCLOHEXANE	337		2.95		C9H13NI	O-TOLUIDINE, N. N-DIMETHYL
3423	CHCL3	396		-1.45 -3.00	-1.46 B	C9H13N101 C9H13N101	NOREPHEDRINE NOREPHEDRINE
3424 3425	N-HEPTANE CHCL3	396 396		-1.00	-1.07 B	C9H13N101	NORPSEUDOEPHEDRINE
3426	N-HEPTANE	396		-2.00		C9H13N101	NORPSEUDOEPHEDRINE
3427	HEXANE	376		1.53		C9H13N104	N-ME-N-ACETYLCARBAMIC ACID:2:3-DI-H-2-MEFURANYL ESTER IPRONIAZID PHOSPHATE
3428 3429	OCTANOL OCTANOL	283 227		0.37 -2.13	0.37 = -2.13 =	C9H13N3O1.H3PO4 C9H13N3O5	1-B-D-ARABINOFURANOSYLCYTOSINE HCL(63878)(PKA=4.21)
34 30	N-BUTANOL	420		-0.97	-1.86	C9H13N3O5	CYTIDINE
3431	OCTANOL	227		-0.79	-0.79 =	C9H13N3O5	CYTOSINE ARABINOSIDE (63878)
3432	OCTANOL	397		1.25	1.25 = 0.14 =	C9H13N5 C9H13N5Ol	ADENINE,9-BUTYL ADENINE,9-(1-HYDROXYMETHYL-PROPYL)
3433 3434	OCTANOL OCTANOL	397 65		0.14 -2.69	-2.69 =	C9H14BR1N1	BUTYLPYRIDINIUM BROWIDE
3435	OCTANOL	65		-2.07	-2.07 =	C9H14BRIN1	PHENYLTRIMETHYLAMMONIUM BROMIDE
3436	OCTANOL	268		-1.09	-1.09 =	C9H14CL1N1	3-PHENYLPROPYLAMINE HYDROCHLORIDE N.N-DIMETHYL-2-(3-PYRIDYL)ETHYLAMINE
3437	OCTANOL OCTANOL	341 341		0.82 0.54	0.82 = 0.54 =	C9H14N2 C9H14N2	N-ETHYL-2-(3-PYRIDYL)ETHYLAMINE
3438 3439	OCTANOL	341		0.90	0.90 =	C9H14N2	N-PROPYL-3-(3-PYRIDYL)METHYLAMINE
3440	OCTANOL	341		0.82	0.82 =	C9H14N2	N-I-PROPYL-3-PYRIDYLMETHYLAMINE
3441	CHCL3	399		1.54 1.31	1.09 B 1.18	C9H14N2O3 C9H14N2O3	BARBITURIC ACID, 5,5-DIETHYL, 1-METHYL/METHARBITAL/ BARBITURIC ACID, 5,5-DIETHYL, 1-METHYL/METHARBITAL/
3442 3443	I-PENT. ACETATE	399 399		0.31	0.23 B	C9H14N2G3	BARBITURIC ACID, 5, 5-DIETHYL, 1-METHYL/METHARBITAL/
3444	OCTANOL	399		0.97	0.97 =	C9H14N2O3	BARBITURIC ACID, 5-ETHYL-5-I-PROPYL/PROBARBITAL/
3445	CHCL 3	399		0.20	0.77 N	C9H14N2 03	BARBITURIC ACID, 5-ETHYL-5-I-PROPYL/PROBARBITAL/ BARBITURIC ACID, 5-ETHYL-5-I-PROPYL/PROBARBITAL/
3446 3447	OILS Benzene	345 399		-0.14 -0.58	1.07 A 0.80 A	C9H14N2O3 C9H14N2O3	BARBITURIC ACID, 5-ETHYL-5-1-PROPYL/PROBARBITAL/
3448	I-PENT. ACETATE	399		0.95	0.81	C9H14N2O3	BARBITURIC ACID.5-ETHYL-5-I-PROPYL/PROBARBITAL/
3449	CCL4	399		-1.21	-0.85 N	C9H14N2O3	BARBITURIC ACID, 5-ETHYL-5-I-PROPYL/PROBARBITAL/
3450 3451	OCTANOL N-BUTANOL	181 181		0.40 -0.15	0.40 =	C9H14N3O8P1 C9H14N3O8P1	CYTIDYLIC ACID
3452	PRIM. PENTANOLS	181	10	0.43		C9H14N308P1	CYTIDYLIC ACID
3453	HEXANOL	181		-0.15		C9H14N3O8P1	CYTIOYLIC ACIO
3454 3455	OCTANOL Diethyl ether	134 423		0.38 2.63	0.38 # 2.42 A	C9H14N4D2S1 C9H14D1S1	6-(2-PENHYDROPYRANYL)-4-AM-3-METHIO-1,2,4-TRIAZINONE A-CYCLOHEXYLTHIOACRYLIC ACID
3456	DETANOL	186		3.84	3.84 =	C9H14D1SI1	PHENOL , P- (TRIMETHYLSILYL)
3457	DILS	347		1.94	2.96 A	C9H14O2	SORBIC ACID, PROPYL ESTER
3458	DIETHYL ETHER	2		0.15 -0.36	0.25 A 0.14 B	C9H14O6 C9H14O6	GLYCERYL TRIACETATE GLYCERYL TRIACETATE
3459 3460	OILS	214		-0.52	0.01 B	C9H14O6	GLYCERYL TRIACETATE
3461	DIETHYL ETHER	3		-0.37	-0.21 A	C9H14O7	TRIMETHYL CITRATE
3462	OILS	200		-1.33	0.03 A 4.72 =	C9H1407	TRIMETHYL CITRATE SILANE, PHENYL-TRIMETHYL
3463 3464	OCTANOL Benzene	298 311		4.72 1.52	4.12 -	C9H14SI1 C9H158102SI1	PHENYLBORONIC ACID+P-TRIMETHYLSILICYL
3465	OCTANOL	348		0.41	0.41 =	C9H15N102	N-BUTYROYLCYCLOBUTANECAR 80 XAMIDE
3466	OCTANOL	348		0.26		C9H15N102	N-I-BUTYROYLCYCLOBUTANECARBOXAMIDE
3467 3468		227 289		2.83 2.69	2.83 =	C9H16CL1N3O2 C9H16CL1N3O2	1-(2-CLET)-3-CYCLOHEXYL-1-NI TROSOUREA(79037) 1-(2-CLET)-3-CYCLOHEXYL-1-NI TROSOUREA(79037)
3469		80		1.40	1.40 =	C9H16N103	UREA, 1.3-DIBUTYRYL
3470	DILS	168	1	-0.23	0.25 B	C9H16N2O2	DIPROPYLHYDANTOIN
3471		134 134		1.85 2.06		C9H16N4UIS1 C9H16N4UISI	3-METHIO-4-AMINO-6-I-PENT-1,2,4-TRIAZINE-5-ONE 3-I-PRTHIO-4-AMINO-6-I-PR-1,2,4-TRIAZINE-5-ONE
3472 3473		134		2.12		C9H16N401S1	3-N-PRTHIO-4-AMINO-6-I-PR-1,2,4-TRIAZINE-5-ONE
3474	GCTANGL	5		1.57	1.57 =	C9H16O4	AZELAIC ACID
3475		212		1.20	1.17 A 1.00 A	C9H16O4 C9H16O4	AZELAIC ACID AZELAIC ACID
3476 3477	DIETHYL ETHER CHCL3	194 194		0.97 -0.58	0.71 A		AZELAIC ACID
3478		4		1.66	1.83	C9H16B4	AZELAIC ACID
3479		235		2.29	2.29 =	C9H17N1	METHYL-I-PROPYL-(1,1-DIMETHYLPROPYN-3-YL)AMINE
	OILS N-BUTANOL	290 377		0.26	-1.56	C9H17N103 C9H17N104	DIETHYL ACETURETHANE/DETONAL/ ACETYLCARNITINE
	CHCL3	424		-3.76	-11.30	C9H18[1N102	N-METHYL4-ACETYL PIPERIDINE METHIODIDE
3483	OCTANOL	218		0.70	0.70 =	C9H18N2O4	MEPROBAMATE
3484		241		-0.07	2.42 ~	C9H18N2S1 C9H18N6	N-HEXYLETHYLENETHIOUREA HEXAMETHYLMELAMINE (13875)
3485 3486		226 425		2.63 -1.92		C9H18O6	GLUCOSE, 2, 3, 6-TR IMETHYL
3487	CHCL 3	425		-1.51	-0.80 N	C9H18O6	A-METHYL GLUCOSIDE, 2, 3-DIMETHYL
3488		292		0.76	1.87 A	C9H19N101	N, N-DIETHYL VALERAMIDE 1, 2, 6-TRIMETHYLPIPERIDINE METHIODIDE
3489 3490		424 424		-3.05 -2.94		C9H20I1N1 C9H20I1N1	1.2.6-TRIMETHYLPIPERIDINE METHIODIDE 1.3.5-TRIMETHYLPIPERIDINE METHIODIDE
3491	DIETHYL ETHER	3		1.04		C9H20N2O1	TETRAETHYLUREA
3492		378		-0.92		C9H2ON2O2	N.N-DIMETHYLCARBAMIC ACID.DIETAMINOETHYL ESTER N-ETHYLCARBAMIC ACID.DIETAMINOETHYL ESTER
3493 3494		378 218		-1.08 2.79	2.79 =	C9H2ON2O2 C9H21N1	TRIPROPYLAMINE
3495	TOLUENE	68		2.52	2.47 B	C9H21N1	TRIPROPYLAMINE
3496		268		-0.88		C9H21N3.2.H2504	OCTYLGUANIDIUM SULFATE TRIPROPYLPHOSPHATE
3497 3498		426 426		1.86 0.88	2.73 N	C9H21O4P1 C9H21O4P1	TRIPROPYL PHOSPHATE
3499	OCTANOL	297	46	-1.84	-1.84 =	C9H22I1N1	TRIMETHYL-HEXYL-AMMONIUM IODIDE
3500	DIETHYL ETHER	3		-0.24	0.65 B	C9H22N2	PENTANE, 2-AMINO, 5-DIETHYLAMINO

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3501	I-BUTANOL	4		1.08	1.01	C9H22N2	PENTANE, 2-AMINO, 5-DIETHYLAMINO
3502 3503	OCTANOL CYCLOHEXANE	206	27	5.18 2.84	5.18 *	C10H3CL2F3N4 C10H4BR2O2	QUINOXALINE IMIDAZOLE,2-TRIFLOROME-5,7-DICL 1,4-NAPHTHOQUINONE,2,3-DIBROMO
3504	OCTANOL	206	27	3.91	3.91 =	C10H4CL1F3N4	QUINOXALINE IMIDAZOLE, 2-TRIFLOROME, 6-CL
3505	CYCLOHEXANE	304		2.28		C10H4CL2N2	MALONONITRILE, 3, 4-DICHLOROBENZAL
3506	CYCLOHEXANE	304 304		2.45 2.71		C10H4CL2N2 C10H4CL2N2	MALONONITRILE, 2, 6-DICHLOROBENZAL MALONONITRILE, 2, 4-DICHLOROBENZAL
3507 3508	CYCLOHEXANE CYCLOHEXANE	141		2.56		C10H4CL202	1,4-NAPHTHOQUINONE,2,3-DICHLORD
3509	CYCLOHEXANE	304		1.97		C10H58R1N2	MALONONITRILE, 3-BRQMOBENZAL
3510 3511	CYCLOHEXANE	304 304		2.03 2.26		CIOH5BRIN2 CIOH5BRIN2	MALONONITRILE,4-BROMOBENZAL MALONONITRILE,2-BROMOBENZAL
3512	CYCLOHEXANE CYCLOHEXANE	141		2.12		C10H5BR102	1,4-NAPHTHOQUINONE,2-BROMO
3513	CYCLOHEXANE	304		1.79		C10H5CL1N2	MALONONITRILE, 3-CHLOROBENZAL
3514 3515	CYCLOHEXANE CYCLOHEXANE	304 304		1.82 2.10		C10H5CL1N2 C10H5CL1N2	MALONONITRILE,4-CHLOROBENZAL MALONONITRILE,2-CHLOROBENZAL
3516	OCTANOL	141		2.15	2.15 =	C10H5CL102	1.4-NAPHTHOQUINONE, 2-CHLORO
3517	CYCLOHEXANE	141		1.91		C10H5CL 102	1,4-NAPHTHOQUINONE,2-CHLORD
3518 3519	HEXANE HEXANE	317 317		5.05 4.60		C10H5CL7 C10H5CL701	HEPTACHLOR HEPTACHLOR EPOXIOE
3520	CYCLOHEXANE	304		1.20		C10H5F1N2	MALONONITRILE, 3-FLUOROBENZAL
3521	CYCLOHEXANE	304		1.22		C10H5F1N2	MALONONITRILE, 4-FLUOROBENZAL
3522 3523	CYCLOHEXANE OCTANOL	304 206	27	1.55 3.08	3.08 =	C10H5F1N2 C10H5F3N4	MALONONITRILE, 2-FLUOROBENZAL QUINOXALINE IMIDAZOLE, 2-TRIFLUOROMETHYL
3524	HEXANE	299		0.87		C10H5F3N401	CARBONYL CYANIDE, P-TRIFLUOROMETHOXYPHENYLHYDRAZONE
3525	OCTANOL	141		-1.08	-1.08 =	C10H5K1S105	1,4-NAPHTHOQUINONE-2-SULFONATE, POTASSIUM SALT
3526	CYCLOHEXANE	304 304		-0.56 -0.07		C10H5N1O2 C10H5N3O2	COUMARIN,3-CYANO MALONONITRILE,3-NITROBENZAL
3527 3528	CYCLOHEXANE CYCLOHEXANE	304		-0.02		C10H5N302	MALONONITRILE, 4-NITROBENZAL
3529	CYCLOHEXANE	304		0.30		C10H5N3O2	MALONONITRILE, 2-NITROBENZAL 1,4-NAPHTHOQUINONE,2-8ROMO,3-AMINO
3530	CYCLOHEXANE	141		0.72 2.12	2.12 =	C10H6BR1N102 C10H6C£1N102	1,4-NAPHTHOQUINDNE,2-CHLORO-3-AMINO
3531 3532	OCTANOL CYCLOHEXANE	141		0.41		C10H6CL1N102	1,4-NAPHTHOQUINONE,2-CHLORO,3-AMINO
3533	OCTANOL	216		2.50	2.50 =	C10H6F3N1	8-TRIFLUOROMETHYLQUINOLINE 4-HYDROXY-7-TRIFLUOROMETHYLQUINOLINE
3534	OCTANDL CYCLOHEXANE	216 304		2.05 1.41	2.05 =	C10H6F3N101 C10H6N2	MALONONITRILE, BENZAL
3535 3536	CYCLOHEXANE	304		-1.62		C10H6N2U1	3-HYDROXYBENZALMALONONITRILE
3537	CYCLOHEXANE	141		-2.15		C10H6N201	4-HYDROXYBENZALMALONON ITRILE
3538 3539	CYCLOHEXANE OCTANOL	304 238		-0.06 1.78	1.78 =	C10H602 C10H602	1,2-NAPHTHOQUINONE 1,4-NAPHTHOQUINONE
3540	DCTANOL	141		1.71	1.71 =	C10H6O2	1.4-NAPHTHOQUINONE
3541	CYCLOHEXANE	141		1.26		C10H602	1,4-maphthoguinome L,4-maphthoguinome, 2-hyoroxy
· 3542 3543	OCTANOL OCTANOL	218 141		1.55 1.38	1.55 = 1.38 =	C10H6O3 C10H6O3	1,4-NAPHTHOQUINONE,2-HYDROXY
3544	CYCLOHEXANE	304		-0.56		C10H7CL1N2O1	CYANOACETAMIDE, 2-CHLOROSENZAL
3545	CYCLOHEXANE	304		-0.53	3.19 =	C10H7CL1N2O1 C10H7CL2F3N2	CY ANDACETAMIDE, 4-CHLOROBENZAL BENZIMIDAZOLE, 2-TRIFLUORMETHYL-4,7-DICL-5,6-DIME
3546 3547	OCTANOL CYCLOHEXANE	206 304		3.19 -1.01	3.19 -	C10H7F1N2O1	CY ANDACETAMIDE, 2-FLUOROBENZAL
3548	OCTANOL	141		1.88	1.88 =	C10H7N102	1,4-NAPHTHOQUINONE, 2-AMINO
3549	CYCLOHEXANE	141 304		-1.90 -1.49		C10H7N102 C10H7N103	1,4-NAPHTHOQUINONE,2-AMINO COUMARIN,3-CARBAMOYL
3550 3551	CYCLOHEXANE OCTANOL	349		3.20	3.20 =	C10H8	AZULENE
35 52	OCTANOL	427		3.37	3.37 =	Clohs	NA PHTHAL ENE NA PHTHAL ENE
3553 3554	OCTANOL OCTANOL	309 428		3.01 3.45	3.01 = 3.45 =	C10H8 C10H8	NAPHTHALENE
3555	CYCLOHEXANE	304		-3.32		C10H8CL2N202	MALONAMIDE, 2,4-DICHLOROBENZAL
3556	CYCLOHEXANE CYCLOHEXANE	304 141		-1.09 1.18		C10H8N2O1 C10H8N2O2	CY ANDACETAMIDE, BENZAL STYRENE, 3-CYANO, B-NITRO, B-METHYL
3557 3558	CYCLOHEXANE	141		1.18		C10H8N2O2	STYRENE, 4-CYAND, 8-NITRO, 8-METHYL
3559	CHCL3	265		-0.45	0.19 N 2.98 =	C10H8N2U4 C10H8U1	A-FURILDIOXIME 1-NAPHTHGL
3560 3561	OCTANOL CYCLOHEXANE	186		2.98 0.52	2.70 -	C10H801	1-NAPHTHOL
3562	OCTANOL	186		2.84	2.84 =	C10H801	2-NAPHTHOL
3563 3564	DIETHYL ETFER CYCLOHEXANE	359		1.77 0.29	1.67 A	C10H801 C10H801	2-NAPHTHOL 2-NAPHTHOL
3565	DIETHYL ETFER	32.3		-2.00	-1.63 A	C10H803S1	NAPHTHALENE SULFONIC ACID
3566	CYCLOHEXANE	304		-3.52		C10H9CL1N2O2 C10H9CL1N2O2	MALONAMIDE,4-CHLOROBENZAL MALONAMIDE,3-CHLOROBENZAL
3567 3568	CYCLOHEXANE CYCLOHEXANE	304 304		-2.69 -2.58		C10H9CL1N2O2	MALONAMIDE, 2-CHLOROBENZAL
3569	CYCLOHEXANE	141		4.40		C1CH9CL2N1O2	STYRENE, 2, 4-DICHLORO, B-NITRO, B-ETHYL
3570	CYCLOHEXANE	141		4.40		C10H9CL2N102 C10H9F1N202	STYRENE,3,4-DICHLORO,B-NITRO,B-ETHYL MALONAMIDE,3-FLUOROBENZAL
3571 3572	CYCLOHEXANE CYCLOHEXANE	304 280		-3.16 1.64		CIOH9FINZUZ	2-METHYLQUINOLINE
3573	CYCLOHEXANE	280	)	1.53		C10H9N1	4-METHYLQUINOLINE
3574	OCTANOL	216		2.57	2.57 = 2.47 =		6-METHYLQUINOLINE 7-METHYLQUINOLINE
3575 3576	OCTANOL OCTANOL	216		2.47 2.60	2.60 =		B-METHYL QUINOL INE
3577	CYCLOHEXANE	280	)	2.22		C10H9N1	8-METHYLQUINOLINE
3578	BENZENE .	77		2.40	2.22 B	C10H9N1 C10H9N1	A-NAPHTHYL AM INE A-NAPHTHYL AM INE
3579 3580	PARAFFINS BENZENE	316		0.99 2.45	2.25 B	C10H9N1	B-NAPHTHYL AMINE
3581	PARAFFINS	316	•	0.98		C10H9N1	B-NAPHTHYLAMINE
3582	OCTANOL OCTANOL	216		2.20 1.84	2.20 = 1.84 =	C10H9N1G1 C10H9N1G1	6-METHOXYQUINOLINE 8-METHOXYQUINOLINE
3583 3564	OCTANOL	410		2.33	2.33 =	C10H9N1U1	8-QUINOLINOL.2-METHYL
3585	OCTANOL	410	)	2.41	2.41 =	C10H9N1O1	8– QU INOL INOL , 4–M ET HYL B– QU INOL INOL , 2–M ET HYL
3586	CHCF3	412		3.22 3.27	2.56 B 2.57 B	C10H9N101 C10H9N101	8-QUINOLINOL, 4-METHYL
3587 3588	CHCL3 N-BUTANOL	410		1.92	2.15	C10H9NLO1	8-CU INCL INOL, 2-METHYL
3589	N-BUTANOL	410		1.96	2.21 2.67 B	C10H9N101 C10H9N101	8-QUINOLINOL, 4-METHYL 8-QUINOLINOL, 2-METHYL
3590 3591	TOLUENE TOLUENE	410 410		2.75 2.77	2.67 B	C10H9N101	8-QUINCLINOL, 4-METHYL
3592	PRIM. PENTANOLS	410	)	2.13	2.40	C10H9N101	8-QUINOLINOL, 2-METHYL
3593	PRIM. PENTANOLS	410		2.19	2.47 2.53	C10H9N101 C10H9N101	8-QUINOLINOL,4-METHYL 8-QUINOLINOL,2-METHYL
3594 3595	I-PENT. ACETATE	410		2.61 2.69	2.61	C10H9N101	8-QUINOLINOL, 4-METHYL
3596	CCL 4	41	2	2.64	2.34 B	C10H9N101	8-QUINOLINOL, 2-METHYL 8-QUINOLINOL, 4-METHYL
3597 3598	CCL4 ME-I-BUT.KETONE	417		2.73 2.50	2.41 B 2.27	C10H9N101 C10H9N101	8-QU INOL I NOL , 2-METHYL
3599	ME-I-BUT.KETONE	410	2	2.63	2.45	C10H9N101	8-QUINOLINOL, 4-METHYL
3600	O-DICL. BENZENE	410	)	3.00		C10H9N101	8-QUINOLINOL, 2-METHYL

NO.	SOLVENT	REF FOOT		LOGP	EMPIRICAL	NAME
		NOTE	SOLV	130	FORMULA	
3601	O-DICL. BENZENE	410	3.01		C10H9N101	8-QUINOLINOL, 4-METHYL
3602	OCTANOL	218	1.41	1.41 =	C10H9N102 C10H9N102	INDULE-3-ACETIC ACID INDULE-3-ACETIC ACID
3603 3604	DIETHYL ETFER Hexane	3 376	1.30 0.21	1.26 A	C10H9N102S1	N-METHYLCARBAMIC ACID, 4-BENZOTHIENYL ESTER
3605	CYCLOHEXANE	141	2.06		C10H9N104	STYRENE, 3, 4-DIOXYMETHYLENE, B-NITRO, B-METHYL
3606	OCTANOL	65 46	-2.64 2.92	-2.64 =	C10H10BR1N1 C10H10BR1N103	N-METHYLQUINOLINIUM BROMIDE STYRENE,5-8ROMO,2-METHOXY,B-NITRO,B-METHYL
3607 3608	CYCLOHEXANE GYCLOHEXANE	141 141	3.19		C10H10CL1N102	STYRENE, 4-CHLORO, B-NITRO, B-ETHYL
3609	CYCLOHEXANE	141	3.23		C10H10CL1N102	STYRENE, 2-CHLORO, B-NITRO, B-ETHYL STYRENE, 3-CHLORO, B-NITRO, B-ETHYL
3610	CYCLOHEXANE OILS	141 383	4.40 -0.60	0.67 A	CIOHIOCLINIO2	P-AMINOPHENYLACETIC ACID, N-CHLOROACETYL
3611 3612	CYCLOHEXANE	141	3.02		C10H10CL1N103	STYRENE,5-CHLORO,2-METHOXY,8-NITRO,B-METHYL
3613	OCTANOL	346	0.67	0.67 =	C10H10CL1N104 C10H10CL1N104	PHENOXYACETIC ACIO, 3-ACETAMIDO-4-CHLORO PHENOXYACETIC ACID, 3-ACETAMIDO-4-CHLORO
3614 3615	OCTANOL HEXANE	302 391	0.75 2.07	0.75 =	C10H10CL304P1	2-CL-1-(2,5-DICLPHENYL )-VINYLPHOSPHATE,0,0-DIME
3616	HEXANE	391	2.43		C10H10CL304P1	2-CL-1-(2,4-DICLPHENYL)-VINYLPHOSPHATE,0,0-DIME 24-DEOXY-5-TRIFLUOROMETHYLURIDINE(75520)(PKA=7.95)
3617	OCTANOL	227 306	-0.48 1.18	-0.48 = 1.20 A	C10H10F3N2O5 C10H10[1N1O6S]	N-(P-1000BENZENESULFONYL)ASPARTIC ACIO
3618 3619	DIETHYL ETHER	306 12	-2.00	-0.58 A	C10H10I1N106S1	N-(P-IDDO8ENZENESULFONYL)ASPARTIC ACID
3620	ETHYL ACETATE	306 12	1.95	2.04 A	C10H10I1N106S1	N-(P-1000BENZENESULFONYL)ASPARTIC ACID N-(P-1000BENZENESULFONYL)ASPARTIC ACID
3621 3622	CL CH2CH2CL OILS	306 382 24	-1.30 4.50	5.28 A	C10H10I1N106S1 C10H10I2O3	BENZOIC ACID, 4-OH, 3, 5-DI-IODO, PROPYL ESTER
3623	OILS	382 24	2.10	3.10 A	C10H10I2U4	BENZOIC ACID, 3, 5-DI-IODO-4-OH, B-OH-PROPYL ESTER
3624	0115	382 24	2.18	3.17 A	C10H10I204 C10H10N202	BENZOIC ACID,4-OH,3,5-DI-IODO,G-OH-PROPYL ESTER MALONAMIDE,BENZAL
3625 3626	CYCLOHEXANE CYCLOHEXANE	304 141	-3.46 2.39		C10H10N2O4	STYRENE, 4-NITRO, B-NITRO, B-ETHYL
3627	OCTANOL	1 34	1.66	1.66 =	C10H10N40151	3-METHIO-4-AMINO-6-PHENYL-1,2,4-TRIAZINE-5-GNE
3628	OCTANOL OCTANOL	393 63 56	-0.13 -0.08	-0.13 = -0.08 =	C10H10N402S1 C10H10N402S1	SULFADIAZINE SULFADIAZINE
3629 3630	DIETHYL ETHER	342	-0.48	-0.32 A	C10H10N402S1	SULFADIAZINE
3631	CHCL3	343 2	0.06	-0.18 8	C10H10N402S1	SULFADIAZINE SULFADIAZINE
3632 3633	CHCL3	326 344 44	-0.03 -0.40	-0.26 B -0.45 B	C10H10N40251 C10H10N40251	SULFADIAZINE
3634	CHCL3	393 63	0.22	0.20 N	C10H10N402S1	SULFADIAZINE
3635	BENZENE	343 2 130 13	-0.89 0.12	-0.07 B	C10H10N402S1 C10H10N402S1	SULFADIAZINE SULFADIAZINE
3636 3637	I-EUTANOL I-PENT. ACETATE	343 2	0.19	0.02	C10H10N402S1	SULFADIAZINE
3638	CCL4	343 2	-2.22	-0.00 A	C10H10N402S1	SULFADIAZINE 4.6-DIAMINO-5-PHENYLAZOPYRIMIDINE
3639 3640	N-BUTANOL Cyclohexane	253 36 304	0.79 1.50	0.61	C10H10N6 C10H10O1	METHYL STYRYL KETONE
3641	CHCL3	429	3.60	4.50 A	C10H10G2	BENZOYLACETONE
3642	CHCL3	387 429 5	3.44 3.15	4.32 A 4.50 A	C10H1002 C10H100Z	BENZOYLACETONE BENZOYLACETONE
3643 3644	BENZENE BENZENE	429 5 387	3.14	4.41 A	C10H1002	BENZOYLACETONE
3645	CCL4	429	2.82	4.27 A	C10H10O2	BENZOYL ACETONE
3646 3647	DIETHYL ETHER I-BUTANOL	3	1.18 1.48	1.15 A 1.57	C10H1004 C10H1004	BENZYLMALONIC ACID BENZYLMALONIC ACID
3648	OCTANOL	10	0.87	0.87 =	C10H10O4	PHENGXYACETIC ACID, 4-ACETYL
3649	OCTANOL	10	0.98	0.98 = 1.25 =	C10H1004 C10H1004	PHENDXYACETIC ACID,3-ACETYL PHENDXYACETIC ACID,2-ACETYL
3650 3651	OCTANOL 50%ETHER+50%DMF	10 125	1.25 0.16	1.20	C10H11BR1N2O3	BARBITURIC ACID, 5-ALLYL-5-(2-BROMALLYL)
3652	OCTANOL	430 46	-0.05	~0.05 =	C10H11CL1N2.H3PC7	5-CHLOROTRYPTAMINE PHOSPHATE BENZENE, 3-CYANO-1-PROPYL
3653 3654	OCTANOL OCTANOL	255 309	2.21	2.21 = 2.82 =	C10H11N1 C10H11N1	INDOLE, 1,2-DIMETHYL
3655	I-PENT. ACETATE	418 3	2.70	2.62	C10H11N1D2	P-AMINOBENZOIC ACID. ALLYL ESTER
3656	OCTANOL	141	2.86 3.45	2.86 =	C10H11N1D2 C10H11N1O2	BENZENE, 2-NITRO-1-BUTENYL STYRENE, B-ETHYL, B-NITRO
3657 3658	CYCLOHEXANE CYCLOHEXANE	141 141	2.98		C10H11N102	STYRENE.2-METHYL.B-NITRO.B-METHYL
3659	CYCLOHEXANE	141	3.00		C10H11N102	STYRENE,4-METHYL,B-NITRO,B-METHYL P+ACETOXYACETANILIDE
3660 3661	CHCL3 OILS	394 383	2.00 -0.55	1.48 B 0.71 A	C10H11N1O3 C10H11N1O3	P-AMINOPHENYLACETIC ACID,N-ACETYL
3662	HEXANE	376	1.20		C10H11N103	N-METHYL-N-ACETYLCARBANIC ACID, PHENYL ESTER
3663	OCTANOL CYCLOHEXANE	384 141	0.90 2.33	0.90 =	C10H11N103	N-METHYL-3-ACETYLPHENYLCARBAMATE STYRENE,4-METHOXY,8-NITRO,8-METHYL
3664 3665	CYCLOHEXANE	141	2.61		C10H11N1D3	STYRENE, 2-METHOXY, B-NITRO, B-METHYL
3666	CYCLOHEXANE	141	2.63	A 75 A	C10H11N103	STYRENE, 3-METHOXY, 8-NITRO, 8-METHYL
3667 3668	OIETHYL ETHER OCTANOL	431 384	-1.00 1.42	-0.75 A	C10H11N104 C10H11N104	BENZOYLSERINE N-METHYL-3-CARBOMETHOXYPHENYLCARBAMATE
3669	OCTANOL	384	1.50	1.50 =	C10H11N104	N-METHYL-4-CARBOMETHOXYPHENYLCARBAMATE
3670	OCTANOL CYCLOHEXANOL	10 302	0.48 1.27	0.48 =	C10H11N104 C10H11N104	PHENOXYACETIC ACID,M-ACETAMIDO PHENOXYACETIC ACID,M-ACETAMIDO
3671 3672	CYCLOHEXANDL	141	0.88		C10H11N1G4	STYRENE, 3,4-DIMETHOXY, B-NITRO
3673	CYCLOHEXANE	141	1.79		C10H11N104	STYRENE, 2, 5-DIMETHOXY, B-NITRO STYRENE, 2, 3-DIMETHOXY, B-NITRO
3674 3675	CYCLOHEXANE CYCLOHEXANE	141 141	1.93 2.04		C10H11N104 C10H11N104	STYRENE, 2, 4-DIMETHOXY, 8-NITRO
3676	CYCLOHEXANE	141	0.77		C10H11N104	STYRENE, 4-HYDROXY, 3-METHOXY, B-NITRO, B-METHYL
3677	OCTANOL CHCL3	393 63 343 2		0.88 = 1.10 N	C10H11N3O3S1 C10H11N3O3S1	SULFAMETHOXAZOLE SULFAMETHOXAZOLE
3678 3679	CHCL3	393 63		1.08 N	C10H11N303S1	SULFAMETHOXAZOLE
3680	BENZENE	343 2	-0.19	1.22 A	C10H11N3O3S1	SULFAMETHOXAZOLE SULFAMETHOXAZOLE
3681 3682	I-PENT. ACETATE	343 2 343 2		1.21 0.60 A	C10H11N3O3S1 C10H11N3O3S1	SULFAMETHOXAZOLE
3683	HEXANE	391	0.99	•	C10H12CL1N102	N-METHYL CARBAMATE, 3, 4-DIMETHYL, 6-CHLOROPHENYL
3684	HEXANE	391 416 14	1.46 0.84		C10H12CL1N102 C10H12CL1N103	N-METHYL CARBAMATE, 3, 5-DIMETHYL, 4-CHLOROPHENYL P-AMINOSALICYLIC ACID, 3-CHLOROPROPYL ESTER
3685 3686		416 14 138	1.23		C10H12F3N1	NORFENFLURAMINE
3687	DIETHYL ETFER	306	0.90		C10H12I1N105S1	N- (P-IOOOBENZENESULFONYL) THREONINE
3688 3689	GHCL3 ETHYL ACETATE	306 306	-0.80 1.65		C10H12I1N105S1 C10H12I1N105S1	N-(P-IODOBENZENESULFONYL)THREONINE N-(P-IODOBENZENESULFONYL)THREONINE
3690	CL CH2CH2CL	306	~0.39		C10H12I IN105S1	N- (P-1000BENZENESUL FONYL ) THREONINE
3691 3692	OLEYL ALCOHOL ETHYL ACETATE	406 432	2.85 1.41	3.42 1.46	C10H12N102S1 C10H12N2	N-TRICLMETHIO-4-METHYLHEXAHYOROPHTHALIMIDE 3-(2-AMINOETHYL)INOOLE/TRYPTAMINE/
3693	DCTANOL	341 60	1.13	1.13 =	C10H12N2	DIHYDRONICOTYRINE
3694	OCTANOL	430 46		-1.02 =	C10H12N2.H3P04	TRYPTAMINE PHOSPHATE 5-HYDROXY-3-(2-AMINOETHYL)INDOLE
3695 3696	OCTANOL ETHYL ACETATE	218 432	0.21 0.61	0.21 = 0.60	C10H12N2O1 C10H12N2O1	5-HYDROXY-3-(2-AMINDETHYL)INDOLE
3697	CCTANGL	276	1.25	1.25 =	C10H12N2O1	2-(G-HYDROXYPROPYL)-BENZIMIDAZOLE
3698 3699	OCTANOL OCTANOL	430 46 141	-1.77 2.67	-1.77 = 2.67 =	C10H12N201.H3P04 C10H12N2O2	S-HYDROXYTRYPTAMINE PHOSPHATE STYRENE, 4-DIMETHYLAMINO-B-NITRO
3700	CYCLOHEXANE	141	1.94		C10H12N202	STYRENE, 4-DIMETHYLAMINO, B-NITRO

NC.	SOLVENT	REF	FOOT NOTE		LOGP OCT	EMPIRICAL FORMULA	NA ME
3701	OCTANOL	399		1.19	1.19 *	C10H12N2O3	BARBITURIC ACID, DIALLYL/DIAL/
3702	CHCL 3	399	1	0.33	0.89 N	C10H12N2O3	BARBITURIC ACID, DIALLYL/DIAL/ BARBITURIC ACID, DIALLYL/DIAL/
3703 3704	OILS OILS	345 296		-0.07 -0.12	1.13 A 1.08 A	C10H12N2O3 C10H12N2O3	BARBITURIC ACID, DIALLYL/DIAL/
3705	OILS	168 399	1	-0.07 -0.35	1.13 A 1.07 A	C10H12N2O3 C10H12N2O3	BARBITURIC ACID, DIALLYL/DIAL/ BARBITURIC ACID, DIALLYL/DIAL/
3706 37¢7	BENZENE I-PENT. ACETATE	399	î	1.23	1.10	C10H12N2O3	BARBITURIC ACID, DIALLYL/DIAL/
3708	CCL4	399	1	-0.96	1.05 A 0.94	C10H12N2O3	BARBITURIC ACID.DIALLYL/DIAL/ BARBITURIC ACID.DIALLYL/DIAL/
37C9 3710	OLEYL ALCOHOL MIXED SOLV#1	82 433		0.38	0.94	C10H12N2O3 C10H12N2O3	BARBITURIC ACID.DIALLYL/DIAL/
3711	50%ETHER+50%DMF	125		0.23	1.35	C10H12N2O3	BARBITURIC ACID, DIALLYL/DIAL/ METHYLAZINPHOS/GUTHION/
3712 3713	HEXANE CHCL3	391 343	2	1.87	1.10 N	C10H12N3O3P1\$2 C10H12N4O2S2	SULFAETHIDOLE
3714	CHCL 3	415	44	0.09	0.69 N	C10H12N402S2	SULFAETHIDOLE SULFAETHIDOLE
3715 3716	BENZENE I-PENT. ACETATE	343 343	2	-0.66 0.90	0.77 A 0.76	C10H12N402S2 C10H12N402S2	SULFAETHIDOLE
3717	CCL4	343	2	-1.27	0.78 A	C10H12N402S2	SULFAETHIDDLE SULFAETHIDDLE
3718 3719	N-KEPTANE OCTANOL	415 227	44	-2.54 -0.60	-0.60 =	C10H12N40252 C10H12N404S1	6-MERCAPTOPURINE RIBOSIDE (4911)
3720	OCTANOL	227		-0.57	-0.57 =	C10H12N4O4S1	9H-PURINE-6-THIOL, 9-B-D-ARABINOFURANOSYL (PKA= 787)
3721	OCTANOL	277 253	14 36	-2.08 -0.92	-2.08 × -1.79	C10H12N4O5 C10H12N4O5	INOS INE INOS INE
3722 3723	N-BUTANOL N-BUTANOL	253	36	-1.30	-2.32	C10H12N4O6	XANTHOSINE
3724	CYCLOHEXANE	325		0.97 1.00		C10H12O1 C10H12O1	4-INDANOL, 1-METHYL 4-INDANOL, 6-METHYL
3725 3726	CYCLOHEXANE	325 325		1.06		C10H1201	4-INDANOL, 7-METHYL
3727	CYCLOHEXANE	325		1.21		C10H12O1 C10H12O1	4-INDANOL, 5-METHYL 5-INDANOL, 7-METHYL
3728 3729	CYCLOHEXANE OCTANOL	325 56		0.87 1.95	1.95 =	C10H12O1	TR-2-PHENYLCYCLOPROPYLCARBINGL
3730	DCTANDL	255		2.30	2.30 = 2.65 A	C10H12O2	ACETIC ACID, B-PHENYLETHYL ESTER P-ETHYLPHENYLACETIC ACID
3731 3732	OILS OILS	383 327		1.56	2.05 A	C10H12O2 C10H12O2	PHENOL, 2-METHOXY-4-ALLYL/EUGENOL/
3733	PARAFFINS	327		1.34		C10H12D2	PHENOL, 2-METHOXY-4-ALLYL/EUGENOL/ A-PHENYLBUTYRIC ACIO
3734 3735	OILS OILS	362 385		0.74 1.16	1.89 A 2.25 A	C10H12O2 C10H12O2	A-PHENYLBUTYRIC ACID
3736	OILS	417		1.06	2.15 A	C10H12O2	B-PHENYLBUTYRIC ACID 4-PHENYLBUTYRIC ACID
3737 3738	OCTANOL	255 361		2.42 0.92	2.42 # 2.08 A	C10H12O2 C10H12O2	4-PHENYLBUTYRIC ACID
3739	OILS	417		1.17	2.35 A	C10H12O2	4-PHENYLBUTYRIC ACID
3740	OCTANOL	255 383		2.32 0.92	2.32 = 2.06 A	C10H12O2 C10H12O3	B-PHENYLPROPIONIC ACID, METHYL ESTER P-ETHOXYPHENYLACETIC ACID
3741 3742	OILS OCTANOL	56		3.04	3.04 =	C10H12D3	P-HYOROXYBENZOIC ACID. PROPYL ESTER
3743	DCTANOL	10 10		2.25 2.65	2.25 = 2.65 =	C10H12O3 C10H12O3	PHENOXYACETIC ACID:3-ETHYL PHENOXYACETIC ACID:2-ETHYL
3744 3745	OCTANOL CYCLOHEXANOL	302		2.55		C10H12O3	PHENOXYACETIC ACID.3-ETHYL
3746	50%ETHER+50%DMF	125		0.32	1.60 2.90 =	C10H13BR1N2O3 C10H13CL2N1	BARBITURIC ACID, 5-(2-BROMALLYL)-5-I-PROPYL N, N-DI-B-CHLOROETHYLANILINE
3747 3748	OCTANOL DIETHYL ETFER	227 374		2.90 1.46	2.16 B	C10H13N1	N-METHYL-1-PHENYLPROPYLAMINE-2
3749	OCTANOL	255		1.41	1.41 =	C10H13N101	BUTYRAMIDE, 4-PHENYL ACETANILIDE, 4-ETHOXY/PHENACETIN/
3750 3751	OCTANOL OILS	186 173		1.58 0.43	1.58 # 1.58 A	C10H13N102 C10H13N102	ACETANILIDE, 4-ETHOXY/PHENACETIN/
3752	OILS	224		0.60	1.77 A		ACETANILIDE, 4-ETHOXY/PHENACETIN/
3753 3754	I-PENT. ACETATE I-PENT. ACETATE	418 418	3	2.81 3.17	2.73 3.10	C10H13N102 C10H13N102	P-AMINOBENZOIC ACID, I-PROPYL ESTER P-AMINOBENZOIC ACID, N-PROPYL ESTER
3755	OLEYL ALCOHOL	390	44	2.28	2.82	C10H13N102	P-AMINOBENZOIC ACID, PROPYL ESTER
3756 3757	OCTANOL OCTANOL	276 276		1.00	1.00 × 0.71 =	C10H13N102 C10H13N102	M-METHOXY-N,N-DIMETHYLBENZAMIDE O-METHOXY-N,N-DIMETHYLBENZAMIDE
3758	OCTANOL	276		0.96	0.96 =	C10H13N102	P-METHOXY-N, N-DIMETHYL BENZAMIDE
3759 3760	HEXANE HEXANE	391 391		0.56		C10H13N102 C10H13N102	N-METHYL CARBAMATE,3,5-DIMETHYLPHENYL N-METHYL CARBAMATE,3,4-DIMETHYLPHENYL
3761	HEXANE	391		0.61		C10H13N102	N-METHYL CARBAMATE, 3-ETHYLPHENYL
3762 3763	OCTANOL OCTANOL	384 384		1.93 1.95	1.93 = 1.95 =	C10H13N1G2 C10H13N1G2	N-METHYL-2-ETHYLPHENYLCARBAMATE N-METHYL-2,3-DIMETHYLPHENYLCARBAMATE
3764	OCTANDL	384		2.03	2.03 =	C10H13N1D2	N-METHYL-2,5-DIMETHYLPHENYLCARBAMATE
3765	OCTANOL OCTANOL	384 384		2.20	2.20 × 2.09 =	C10H13N102 C10H13N102	N-METHYL-3-ETHYLPHENYLCARBAMATE N-METHYL-3,4-DIMETHYLPHENYLCARBAMATE
3766 3767	OCTANOL	384		2.23	2.23 =	C10H13N102	N-METHYL-3,5-DIMETHYLPHENYLCARBAMATE
	OCTANOL HEXANE	384 391		2.23	2.23 =	C10H13N102 C10H13N102S1	N-METHYL-4-ETHYLPHENYLCARBAMATE N-METHYL CARBAMATE,3-METHYL,4-METHYLTHIOPHENYL
3769 3770		384		2.47	2.47 =	C10H13N102S1	N-METHYL-3-METHYL-4-METHYLTHIOPHENYLCARBAMATE
3771	N-HEPTANE	370 384	14	1.02 1.24	1.24 =	C10H13N1O3 C10H13N1O3	P-AMINOSALICYLIC ACID,N-PROPYĽ ESTER N-METHYL-2-ETHOXYPHENYLCARBAMATE
3772 3773	OCTANOL OCTANOL	384		1.75	1.75 =	C10H13N1O3	N-METHYL-3-ETHOXYPHENYLCARBAMATE
3774		384		1.63 -0.68	1.63 =	C10H13N103 C10H13N104	N-METHYL-4-ETHOXYPHENYLCARBAMATE P-AMINOSALICYLIC ACID.3-HYDROXYPROPYL ESTER
3775 3776		370 227	14	-0.56	-0.56 =	C10H13N503S1	B-2'-DEOXYTHIOGUANOSINE (71261)
3777	OCTANDL	227	• •	-0.79	-0.79 =		A-2*-DEDXYTHIOGUANOSINE (71851) ADENOSINE
3778 3779		277 218		-1.10 -1.23	-1.10 = -1.23 =	C10H13N504	ADENOS INE
3780	N-BUTANOL	253	36	-0.18	-0.76	C10H13N504	ADENOS INE
3781 3782		253 56		-0.92 4.11	-1.79 4.11 =	C10H13N5O5 C10H14	GU ANOS INE BENZENE, T-BUTYL
3783	OCTANOL	298		4.11	4.11 =	C10H14	BENZENE, T-BUTYL
3784 3785		396 396		2.90 1.24	2.26 B	C10H14CL1N1 C10H14CL1N1	CHLORPHENTERMINE CHLORPHENTERMINE
3786	DCTANOL	392		2.15	2.15 =	C10H14N105P151	PARATHION
3787 3788		392 341		1.69 0.97	1.69 = 0.97 =	C10H14N1O6P1 C10H14N2	PARA-OXON ANABASINE
3789	DIETHYL ETHER	434		-0.23	0.66 B	C10H14N2	ANABAS INE
3790 3791		434 434		-0.58 0.82	0.54 8	C10H14N2 C10H14N2	ANABASINE ANABASINE
3792	BENZENE	434		0.30	0.76 B	C10H14N2	ANABAS INE
3793		434 434		0.20 -0.01	0.81 B	C10H14N2 C10H14N2	ANABAS INE ANABAS INE
3794 3795	CL CH2CH2CL	434		0.52		C10H14N2	ANABASINE
3796 3757	PARAFFINS OCTANOL	434 341		-0.60 1.13	1.13 =	C10H14N2 C10H14N2	ANABAS INE 4-(n-methyl)-3-pryidyl butene-1-ylamine
3798	OCTANOL	341	60	1.17	1.17 =	C10H14N2	NICOTINE
3799 3800		435 435		0.25 1.89	1.38 A	C10H14N2 C10H14N2	NI COTINE NI COTINE
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NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP	EMPIRICAL FORMULA	NAME
3801	BENZENE	435		0.98	1.23 B	C10H14N2	NICOTINE
3802	XYLENE	435		0.75	1.41 8	C10H14N2	NICOTINE
3803	TOLUENE	435		0.86	1+25 B	C10H14N2 C10H14N2	· NICOTINE NICOTINE
3804 3805	NITROBENZENE N-BUTYL ACETATE	435 435		0.91 0.78	1.62	C10H14N2	NICOTINE
3806	CCL4	435		0.94	0.80 B	C10H14N2	NICOTINE
3807	CL CH2CH2CL	435		1-17		C10H14N2 C10H14N2	NICOTINE NICOTINE
3808 3809	N-HEPTANE N-HEPTANE	435		0.03 -0.80		C10H14N2	NICOTINE
3810	O-DICL. BENZENE	435	i	1.03		C10H14N2	NICOTINE
3811	PARAFFINS	435		0.05	1.10 =	C10H14N2 C10H14N2	NICOTINE 3-PYRIDYLMETHYL-N-PYRROLIDINE
3812 3813	OCTANOL OCTANOL	341 218		1.10	0.33 =	C10H14N2O1	NIKETHAMIDE
3814	OCTANOL	341		0.04	0.04 =	C10H14N2O1	3-PYRIDYLMETHYL-N-HORPHOLINE
3815	N-HEPTANE	419		-0.85		C10H14N2O1	UREA, ETHYL, M-TOLYL- UREA, ETHYL, O-TOLYL-
3816 3817	N-HEPTANE N-HEPTANE	419		-1.18 -0.89		C10H14N2OL C10H14N2OL	UREA, ETHYL, P-TOLYL-
3818	N-HEPTANE	419		-1.80		C10H14N2O1	UREA, HETHYL, O-PHENETYL-
3819	N-FEPTANE	419		-0.96	1 43 -	C10H14N2G1	UREA, N-PROPYLPHENYL- N-NETHYL-3-DIMETHYLAMINOPHENYLCARBAMATE
3820 3821	OCTANOL N-HEPTANE	384 419		1.43 -1.66	1.43 =	C10H14N2O2 C10H14N2O2	UREA, ETHYL, O-ANISYL-
3822	N-HEPTANE	419		-1.55		C10H14N2O2	UREA, ETHYL, P-ANISYL-
3823	OCTANOL	. 518		2.19	2.19 =	C10H14N2O2S1 C10H14N2O3	BARBITURIC ACID, 5-ETHYL-5-METHYLALLYL-2-THIO BARBITURIC ACID, 5-ALLYL-5-I-PROPYL
3824 3825	OILS OILS	345 371		0.05 0.24	1.24 A 0.64 B	C10H14N4O3	CAFFEINE, ETHOXY
3826	OCTANOL	181		-0.22	-0.22 #	C10H14N507P1	3-ADENYLIC ACID
3827	N-BUTANOL	181		-0.52		C10H14N5O7P1 C10H14N5O7P1	3-ADENYLIC ACID 3-ADENYLIC ACID
3828 3829	PRIM. PENTANOLS Hexangl	181		-0.10 -0.22		C10H14N507Pl	3-ADENYLIC ACID
3830	OCTANOL	181	. 10	0.28	0.28 =	C10H14N5O7P1	5-ADENYLIC ACID
3831	N-BUTANOL	181		-0.70		C10H14N507P1	5-ADENYLIC ACID 5-ADENYLIC ACID
3832 3833	PRIM. PENTANOLS HEXANOL	181		-0.40 -0.30		C10H14N5O7P1 C10H14N5O7P1	5-ADENYLIC ACID
3834	OCTANOL	181		0.68	0.68 =	C10H14N508P1	GUANYL IC ACID
3835	N-BUTANOL	181		-0.70		C10H14N508P1	GUANYLIC ACID GUANYLIC ACID
3836 3837	PRIM. PENTANOLS HEXANOL	181		-0.40 -0.40		C10H14N508P1 C10H14N508P1	GUANYLIC ACID
3838	HEXANE	372	2	0.51		C10H1401	BUTANOL, 4-PHENYL
3839	OCTANOL	56		3.31	3.31 =	C10H1401 C10H1401	P-T-BUTYLPHENOL P-T-BUTYLPHENOL
3840 3841	CYCLOHEXANE	325		1.12 1.29		C10H1401	P-T-BUTYLPHENOL
3842	OCTANOL	65		1.97	1.97 =	C10H14D1	2-DECALONE
3843	CYCLOHEXANE	325		1.30	2.70 =	C10H1401 C10H1401	PHENOL, 2-METHYL, 5-I-PROPYL PROPANE, 1-METHOXY-3-PHENYL
3844 3845	OCTANOL OCTANOL	255 186		2.70 3.30	3.30 =	C10H1401	THYMOL
3846	DILS	173		2.79	3.73 A	C10H1401	THYNOL
3847 3848	OILS OILS	82 436		2.78 2.65	3.72 A 3.68 A	C10H1401 C10H1401	THYMOL THYMOL
3849	OLEYL ALCOHOL	82		2.98	3.52	C10H1401	THYMOL
3850	OCTANOL	186		1.52 2.16	1.52 = 3.15 A	C10H14G2 C10H14G2	CAMPHORQUINONE PHENOL+2-METHOXY-4-PROPYL/P-PROPYLGUATACOL/
3851 3852	OILS Paraffins	327 327		1.78	3.13	C10H1402	PHENOL , 2-METHOXY-4-PROPYL/P-PROPYLGUAIACOL
3853	OCTANOL	218	3	1.41	1.41 =	C10H1403	1,2-PROPANEDIOL, 3-(2-TOLYLOXY)
3854 3855	OCTANOL DIETHYL ETHER	373		-1.39 1.49	-1.39 = 2.17 B	C10H15CL1N2OI C10H15N1	NI-BUTYLNICOTINAMIDE CHLORIDE BENZYLPROPYLAMINE
3856	XYL ENE	422		1.32	1.96 B	C10H15N1	1-BENZYL PROPYL AM INE
3857	OCTANOL	312		3.58	3.58 = 2.12 B	C10H15N1 C10H15N1	N-BUTYLANILINE METHAMPHETAMINE/DESOXYEPHEDRINE/
3858 3859	CHCL3 XYLENE	396 422		2.75 1.58	2.23 B	C10H15N1	METHAMPHETAMINE/DESCRYEPHEDRINE/
3860	N-HEPTANE	138	3	1.24		C10H15N1	METHAMPHETAMINE/DESOXYEPHEDRINE/
3861 3862	N-HEPTANE Diethyl ether	396 374		0.71 1.46	2.14 B	C10H15N1 C10H15N1	HETHAMPHETAMINE/DESCIXYEPHEDRINE/ N-METHYL-G-PHENYLPROPYLAMINE
3863	N-FEPTANE	421		1.63		C10H15N1	PHENETHYLDIHETHYLAMINE
3864	CHCL3	396		2.71	2.10 B	C10H15N1	PHENTERMINE PHENTERMINE
3865 3866	N-HEPTANE OCTANOL	396		1.80 0.93	0.93 =	C10H15N1 C10H15N101	EPHEDRINE
3867	DIETHYL ETHER			0.30	1.12 B	C10H15N101	EPHEDR INE
3868	CYCLOHEXANE CHCL3	357 405		-0.39 1.05	0.75 B	C10H15N101 C10H15N101	EPHEDRINE EPHEDRINE
	CHCL3	396		0.38		C10H15N101	EPHEDRINE
3871	I-BUTANOL	4	<b>,</b>	1.18	1.15	C10H15N101	EPHEDRINE EDUCATINE
3872 3873		396		-3.00 1.30	0.89 R	C10H15N101 C10H15N101	EPHEOR INE PS EUDO EPHEDR INE
3874		396		-1.54		C10H15N101	PS EUDOEPHEDRINE
3875	DIETHYL ETPER	113	3	2.22	2.05 A	C10H15N102S1	N. N-DIETHYL BENZENE SUL FONAM IDE
3876 3877		113 397		3.65 1.79	4.08 N	C10H15N102S1 C10H15N5	N,N-DIETHYLBENZENESULFONAMIDE ADENINE,9-PENTYL
3878		397	7	0.66	0.66 =	C10H15N501	ADENINE,9-(1-HYDROXYMETHYL-BUTYL)
3879	OCTANOL	181		0.89	0.89 =	C10H15N5O10P2 C10H15N5O10P2	ADP
3880	N-EUTANOL PRIM. PENTANOLS	181		-0.52 0.85		C10H15N5010P2	ADP
3882	HEXANOL	181	18	0.71		C10H15N5G10P2	ADP
	OCTANOL	437		3.46 1.64	3.46 = 1.64 =	C10H15O3P1S1 C10H15O4P1	O,O-DIETHYL-O-PHENYLPHDSPHOROTHIOATE O,O-DIETHYL-O-PHENYLPHOSPHATE
	OCTANOL OCTANOL	437 347		1.34	1.34 =		N-BUTYL-3-PYRIOYLMETHYLAMINE
3886	OCTANOL	341	60	1.01	1.01 =	CIOH16N2	N.N-DIETHYL-3-PYRIDYLMETHYLAMINE
3887	OCTANOL 50%ETHER+50%DMF	341 125		0.91 0.71	0.91 = 2.57	C10H16N2 C10H16N2O2S1	4-(N-METHYL)-3-PYRIDYLBUTYLAMINE 5-S-BUTYL-5-ET-2-THIOBARBITURIC ACID/INACTIN/
3888 3889		218		1.89	1.89 =	C10H16N2O3	BARBITURIC ACIO, 5-BUTYL-5-ETHYL
3890	OILS	34	5	0.41	1.56 A	C10H16N2O3	BARBITURIC ACID, 5-BUTYL-5-ETHYL
3891 3892		345		0.13 0.29	1.31 A 1.52	C10H16N2O3	BARBITURIC ACID, 5-ETHYL-5-S-BUTYL BARBITURIC ACID, 5-S-BUTYL-5-ETHYL
3893	OCTANOL	134	4	2.14	2.14 =	C10H16N4O151	3-METHIO-4-AMINO-6-CYCLOHEXYL-1,2,4-TRIAZINE-5-ONE
3894		181	l 10 l 10	1.64 0.15	1.64 =	C10H16N5O13P3 C10H16N5O13P3	AT P AT P
3895 3896		18	10	1.04		C10H16N5D13P3	ATP
3897	HEXANOL	182	18	1.18	2 14 -	C10H16N5013P3	ATP ADAMANTANE, 1-HYDROXY
3898 3899	OCTANOL DIETHYL ETHER	218		2.14 1.45		C10H1601 C10H1604	CAMPHORIC ACID
3900	CHCL3	46		-1.30		C10H16U4	CAMPHORIC ACID

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
3901	XYLENE	46		-1.81	-0.18 A	C10H1604	CAMPHORIC ACID
3902	OCTANOL	348		0.75	0.75 =	C10H17N102 C10H17N102	N-PENT ANDYLCYCLOBUTANECARBOXAMIDE N-I-PENTANOYLCYCLOBUTANECARBOXAMIDE
3903 3904	OCTANOL OCTANOL	348 348		0.48 0.53	0.48 = 0.53 =	C10H17N102	N-T-PENTANOYLCYCLOBUTANECARBOXAMIDE
3905	OCTANOL	134		0.49	0.49 =	C10H17N502	3-MORPHOLINO-4-AMINO-6-I-PR-1,2,4-TRIAZINE-5-ONE
3906	OCTANOL	227		3.30	3.30 =	C10H18CL1N2O2	1-(2-CLET)-3(4-MECYCLOHEXYL)-1-NITROSOUREA (95441)
3907 3908	CHCL3	424 67	46	-3.67 -2.90		C10H1811N102 C10H18N2O4	QUINUCLIDINOL-3-ACETATE METHIODIDE D.LLYSINE, DIACETYL
3909	CHCL3 OCTANOL	134		3.21	3.21 =	C10H18N40151	3-N-BUTYLTHIO-4-AMINO-6-I-PR-1,2,4-TRIAZINE-5-ONE
3910	OCTANOL	134		2.68	2.68 =	C10H18N4O1S1	3-METHIO-4-AMINO-6-N-HEXYL-1,2,4-TRIAZINE-5-ONE
3911	DIETHYL ETHER	212		1.76	1.65 A	C10H1804	SEBACIC ACID SEBACIC ACID
3912 3913	CHCL3 DIETHYL ETHER	194 2		0.04 -0.28	1.40 A -0.13 A	C10H1804 C10H1806	TRIETHYLENE GLYCOL DIACETATE
3914	OILS	2		-1.48	-0.79 8	C10H18G6	TRIETHYLENE GLYCOL, DIACETATE
3915	OILS	2		-1.48	-0.11 A	C10H1806	TRIETHYLENE GLYCOL, DIACETATE ETHYLPROPYLACETURETHANE/EPRONAL/
3916 3917	OILS OCTANOL	290 134		0.52 1.78	1.66 A 1.78 =	C10H19N103 C10H19N501	3-N-BUTYLAMINO-4-AMINO-6-I-PR-1,2,4-TRIAZINE-5-ONE
3918	PARAFFINS	241		0.52		C10H20N2S1	N-HEPTYLETHYLENETHIOUREA
3919	DIETHYL ETHER	378		-1.20	-0.11 B	C10H20N202	N-ALLYLCARBAMIC ACID:DIETAMINGETHYL ESTER MENTHOL
3920 3921	OILS OILS	173 224		2.27	3.25 A 3.37 A	C10H2001 C10H2001	MENTHOL
3922	OCTANOL	218		4.09	4.09 =	C10H20G2	DE CANGIC ACID
3923	N-HEPTANE	139		1.87		C10H20D2	DECANGIC ACID GLUCOPYRANDSIDE,4-T-BUTYL (BETA)
3924	OCTANOL	438 425		1.18 0.20	1.18 = 0.77 N	C10H20O6 C10H2OO6	GLUCOSE, 2, 3, 4, 6-TETRAMETHYL
3925 3926	CHCL3	425		0.52	1.08 N	C10H20O6	B-METHYLGLUCOSIDE, 2, 3, 4-TRIMETHYL
3927	CHCL3	396	31	3.37	2.65 8	C10H21N1	PROPYL HEXEDRINE
3928	N-HEPTANE	396		2.24	0.54 8	C10H21N1 C10H22N2U2	PROPYLHEXEDRINE N-PROPYLCARBAMIC ACID.DIETAMINOETHYL ESTER
3929 3930	DIETHYL ETHER DIETHYL ETHER	378 378		-0.46 -0.50	0.50 8	Clohzznzoz	N-I-PROPYLCARBAMIC ACID. DIETAMINOETHYL ESTER
3931	DIETHYL ETHER	3		1.32	1.27 A	C10H2202	DECAMETHYLENEGLYCOL
3932	OILS	2		-2.25	-1.42 8	C10H22O5 C10H23O4P1	TETRAETHYLENEGLYCOL, DIMETHYL ETHER DI-AMYLPHOSPHATE
3933 3934	DI-BUTYL ETHER OCTANOL	236 298		0.79 4.02	4.02 =	C10H24SI1	SILANE, OCTYL-DIMETHYL
3935	CYCLOHEXANE	141		2.49		C11H6CL202	1, 4-NAPHTHOQUINONE, 2, 3-D ICHLORO, 5-METHYL
3936	CYCLOHEXANE	141		3.06 2.85		C11H6CL2O2 C11H7BR1O2	1,4-NAPHTHOQUINONE,2,3-DICHLORO,6-METHYL 1,4-NAPHTHOQUINONE,2-METHYL,3-BROMO
3937 3938	CYCLOHEXANE CYCLOHEXANE	141		2.17		C11H7BR103	1,4-NAPHTHOQUINONE,2-BROMO,3-METHOXY
3939	CYCLOHEXANE	141		2.61		C11H7C£102	1,4-NAPHTHOQUINONE,2-METHYL,3-CHLORO
3940	CHCL 3	407		1.45 1.56		C11H8CL1N102 C11H8N2	5-CHLORG-8-ACETGXYQUINGLINE MALONONITRILE, A-METHYLBENZAL
3941 3942	CYCLOHEXANE CYCLOHEXANE	141 304		1.85		C11H8N2	MALONONITRILE, 2-METHYLBENZAL
3943	CYCLOHEXANE	304		2.04		C11H8N2	MALONONITRILE, 4-METHYL BENZAL
3944	CYCLOHEXANE	304		2.11		C11H8N2 C11H8N2O1	MALONONITRILE.3-METHYLBENZAL MALONONITRILE.4-METHOXYBENZAL
3945 3946	CYCLOHEXANE CYCLOHEXANE	304 304		1.46		C11H8N2O1	MALONONITRILE, 3-METHOXYBENZAL
3947	CYCLOHEXANE	304		1.94		C11H8N2O1	MALONONITRILE, 2-METHOXYBENZAL
3948	CYCLOHEXANE	141		0.30	2 10 -	C11H8N2O2	MALONONITRILE,3-METHOXY-4-HYOROXYBENZAL 1,4-NAPHTHOQUINONE,6-METHYL
3949 3950	OCTANOL OCTANOL	141		2.10 2.20	2.10 = 2.20 =	C11H8O2 C11H8O2	1,4-NAPHTHOQUINONE, 2-METHYL
3951	CYCLOHEXANE	141		1.82		C11H8O2	1,4-NAPHTHOQUINONE,6-METHYL
3952	CYCLOHEXANE.	141		1.84		C11H8O2 C11H8O2	1,4-NAPHTHOQUINONE,5-METHYL 1,4-NAPHTHOQUINONE,2-METHYL
3953 3954	CYCLOHEXANE CYCLOHEXANE	141		1.88		C11H802S1	1,4-NAPHTHOQUINONE,2-METHYLTHIO
3955	CHCL3	386		3.17	4.10 A	C11H8C2S1SE1	1-{2-SELENUPHEN-YL}-3(2-THIENYL}-1,3-PROPANEDIONE 1-{2-SELENOPHEN-YL}-3(2-THIENYL}-1,3-PROPANEDIONE
3956	BENZENE	388		2.75 3.17	4.07 A	C11H802S15E1 C11H802SE2	1.3-DI (2-SEL ENOPHEN-YL 1-1.3-PROPANED IONE
3957 3958	CHCL3 BENZENE	388		3.16	4.46 A	C11H802SE2	1.3-DI(2-SELENOPHEN-YL)-1.3-PROPANEDIONE
3959	CYCLOHEXANE	304		0.66		C11H8O3	COUMARIN, 3-ACETYL
3960	OCTANOL	141		1.35 0.48	1.35 =	C11H8O3 C11H8O3	1,4-NAPHTHOQUINONE, 2-METHOXY 1,4-NAPHTHOQUINONE,2-METHOXY
3961 3962	CYCLOHEXANE OCTANOL	141		1.20	1.20 =	C11H8O3	1,4-NAPHTHOQUINONE,2-METHYL-3-HYDROXY
3963		141	L	0.79		C11H8O3	1,4-NAPHTHOQUINONE,2-METHYL,3-HYDROXY 1-(2-SELENOPHEN-YL)-3(2-FURYL)-1,3-PROPANEDIONE
3964	CHCL3	388		3.10 2.68	4.03 A	C11H8O3SE1 C11H8O3SE1	1-(2-SEL ENOPHEN-YL)-3(2-FURYL)-1,3-PROPANEDIONE
3965 3966	BENZENE OCTANOL	388		2.45		C11H9N1	4-PHENYL PYRIDINE
3967	OCTANOL	216	á	1.58	1.58 =		6-ACETYLQUINOLINE 2-[P-AMINOPHENYL]-PYRIDINE
3968	PARAFFINS	439		-0.33		C11H10N2 C11H10N2O1	CY ANDACET AM IDE . 2 - METHYLBENZAL
3969 3970	CYCLOHEXANE CYCLOHEXANE	304 304		-0.73 -0.54		C11H10N2O1	CYANDACETAMIDE: 4-METHYLBENZAL
3971	CYCLOHEXANE	304	¥	-1.10		C11H10N2O2	CYANDACETAMIDE,4-METHOXYBENZAL CYANDACETAMIDE,2-METHOXYBENZAL
3972		304 304		-0.92 -0.91		C11H10N2O2 C11H10N2O2	CY ANDACETAMIDE , 3-METHOXYBENZAL
3973 3974	CYCLOHEXANE	280	0	2.02		C11H11N1	2. A-DIMETHYLOUINOLINE
3975	CYCLOHEXANE	141		2.65		C11H11N1O4 C11H11N1O4	STYRENE, 3, 4-DIOXYMETHYLENE, B-NITRO, B-ETHYL STYRENE, 4-METHOXYCARBONYL, B-NITRO, B-METHYL
3976 3977	CYCLOHEXANE OCTANOL	23		2.30 2.28	2.28 =	C11H11N104	1-PHENYL-3,5-DIMETHYL-4-NITROSOPYRAZOLE
3978		284	4	0.83	1.94 A	C11H11N3O1	1-PHENYL-3,5-DIMETHYL-4-NITROSOPYRAZOLE
3979	OCTANOL	39		-0.02	-0.02 =	C11H11N302S1	SULFAPYRIDINE SULFAPYRIDINE
3980 3981		56 343		0.00 -0.40	0.00 = -0.23 A		SULFAPYRIDINE
3982	DIETHYL ETHER	11	3	-0.26	-0.12 A	C11H11N3O2S1	SULFAPYRIDINE
3983	CHCL3	343	32	0.02	-0.21 8 -0.18 8	C11H11N3O2S1 C11H11N3O2S1	SULFAPYRIDINE SULFAPYRIDINE
3984 3985		11: 39:		0.04	-0.20 B	C11H11N3O2S1	SULFAPYRIDINE
3986	BENZENE	343	32	-0.75	0.03 B	C11H11N302S1	SULFAPYRIDINE SULFAPYRIDINE
3987		34: 34:			0.19 0.00 A	C11H11N3O2S1 C11H11N3O2S1	SULFAPYRIDINE
3988 3989		6.		-2.76	-2.76 =	Clihizbrini	ETHYLQUINOLINIUM BROMIDE
3990	OCTANOL	•	9	1.14	1.14 =	C11H12CL2N2O5	CHLORAMPHENICOL CHLORAMPHENICOL
3991		441		0.62 -0.65	0.67 A		CHLORAMPHENICOL
3992 3993		44	0 12	-1.45	0.00 A	C11H12CL2N2O5	CHLORAMPHENICOL
3994	ETHYL ACETATE	44	0	1.52	1.57	C11H12CL2N2O5 C11H12CL2N2O5	CHLORAMPHENICOL CHLORAMPHENICOL
3955 3996		44		-1.48 2.93	3.50	C11H12CL3N102S1	N-TRICLMETHIO-4, 5-DIMETHYL TETRAHYDROPHTHAL IMIDE
3997	CHCL 3	30	6	1.70	2.69 A	C11H12[[N1O4S1	N-(P-10D0BENZENESULFONYL)PROLINE N-(P-10D0BENZENESULFONYL)PROLINE
3998	CCL4	3 Q		-0.18 1.70	1.69 A	C11H12[1N1045] C11H12[1N1045]	N-(P-1000BENZENESUL FON YL) PROLINE
3999 4000		30		0.67	0.66 A		N- (P-IODO BENZ EN ESUL FON YL ) HYDROXY PROLINE

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
4001 4002	CHCL3 ETHYL ACETATE	306 306	12	-0.72 1.65	0.55 A 1.78 A	C11H12I1N105S1 C11H12I1N105S1	N- (P-1000BENZENESUL FONYL ) HYDROXYPROL I NE N- (P-1000BENZENESUL FONYL ) HYDROXYPROL I NE
4003	CCL4	306 306		-2.00 -0.25	0.15 A	C11H12I1N105S1 C11H12I1N105S1	N-(P-IODOBENZENESULFONYL)HYDROXYPROLINE N-(P-IODOBENZENESULFONYL)HYDROXYPROLINE
4004 4005	CLCH2CH2CL DIETHYL ETFER	306		1.23	1.25 A	C11H12I1N1O6S1	N-(P-IODOBENZENESULFONYL)GLUTAMIC ACID
4006 4007	CHCL3 CLCH2CH2CL	306 306	12	-2.00 -1.15	-0.58 A	C11H12I1N1O6S1 C11H12I1N1O6S1	N-(P-1000BENZENESULFONYL)GLUTAMIC ACIO N-(P-1000BENZENESULFONYL)GLUTAMIC ACID
4008	QILS	382	24	4.99 5.01	5.72 A 5.75 A	C11H12I2O3 C11H12I2O3	BENZOIC ACID, 4-OH, 3,5-DI-IODO, BUTYL ESTER BENZOIC ACID, 4-OH, 3,5-DI-IODO, S-BUTYL ESTER
4009 4010	OILS OILS	382 382	24 24	2.35	3.33 Å	C11H12I2O4	BENZOIC ACID, 4-OH, 3, 5-DI-IODO, D-OH-BUTYL ESTER
4011 4012	N-FEPTANE OCTANOL	441 186	12	0.23	0.23 =	C11H12N2 C11H12N2O1	TETRAHYDRO-B-CARBOLINE ANTIPYRINE
4013	DIETHYL ETHER	3 394		-1.14 0.88	-0.16 B	C11H12N2O1 C11H12N2O1	ANTIPYRINE ANTIPYRINE
4014 4015	CHCL3 CHEL3	344	12	1.45	1.00 B	C11H12N2O1	ANTIPYRINE
4016 4017	CHCL3 CHCL3	254 338	12 44	1.33 1.45	0.91 B 1.01 B	C11H12N2O1 C11H12N2O1	ANTIPYRINE ANTIPYRINE
4018 4019	OILS OILS	2 69		-1.49 -1.16	-0.12 A 0.15 A	C11H12N2O1 C11H12N2O1	ANTIPYRINE ANTIPYRINE
4020	BENZENE	338	44	-1.05		C11H12N2O1	ANTIPYRINE ANTIPYRINE
4021 4022	I-BUTANOL N+HEPTANE	4 254		0.51 -2.30	0.21	C11H12N2O1 C11H12N2O1	ANTIPYRINE
4023 4024	N-HEPTANE N-HEPTANE	338 340	44	-1.40 -2.30		C11H12N2O1 C11H12N2O1	ANTIPYRINE ANTIPYRINE
4025	OLEYL ALCOHOL	82		-0.52	0.05 1.53 =	C11H12N2O1 C11H12N2O2	ANTIPYRINE HYDANTOIN,5-ETHYL-5-PHENYL
4026 4027	OCTANOL CYCLOHEXANE	218 304		1.53 -2.86	1.55 -	C11H12N2O2	MALONAMIDE, 2-METHYLBENZAL
4028 4029	CYCLOHEXANE CYCLOHEXANE	304 304		-2.80 -2.68		C11H12N2O2 C11H12N2O2	MALONAMIDE,4-METHYLBENZAL MALONAMIDE,3-METHYLBENZAL
4030	OCTANOL	56 304		-1.04 -4.00	-1.04 =	C11H12N2O2 C11H12N2O3	TRYPTOPHAN, DL Malonamide, 2-methoxybenzal
4031 4032	CYCLOHEXANE CYCLOHEXANE	304		-3.52		C11H12N2O3	MALONAMIDE,4-METHOXYBENZAL
4033 4034	CYCLOHEXANE OCTANOL	304 393	63	-3.42 0.13	0.13 =	C11H12N2O3 C11H12N4O2S1	MALONAMIDE,3-METHOXYBENZAL SULFAMERAZINE
4035 4036	OCTANGL DIETHYL ETPER	56 113	15	0.14 -0.18	0.14 = -0.05 A	C11H12N4O2S1 C11H12N4O2S1	SULFAMERAZINE SULFAMERAZINE
4037	CHCL3	343	2	0.38	0.09 8	C11H12N4O2S1	SULFAMERAZINE
4038 4039	CHCL3	113 393	15 63	0.45 0.48	0.15 B 0.18 B	C11H12N402S1 C11H12N402S1	SULFAMERAZINE SULFAMERAZINE
4040 4041	BENZENE I-PENT. ACETATE	343 343	2	-0.69 0.32	0.07 B 0.16	C11H12N4O2S1 C11H12N4O2S1	SULFAMERAZINE SULFAMERAZINE
4042	CCL4	343	2	-1.66	0.46 A -0.06	C11H12N4O251 C11H12N4O3S	SULFAMERAZINE SULFAMETHOXYPYRIDAZINE
4043 4044	I-BUTANOL I-BUTANOL	130 130	13 13	0.32 0.85	0.69	C11H12N4O3S	SULFAMETHOXYPYRIDAZINE
4045 4046	OCTANOL CHCL3	393 343	63 2	0.40 0.62	0.40 = 1.17 N	C11H12N403S1 C1LH12N403S1	SULFAMETHOXYPYRIDAZINE SULFAMETHOXYPYRIDAZINE
4047 4048	CHCL3 CHCL3	344	44 63	0.90 0.67	1.38 N 0.34 B	C11H12N4O3S1 C11H12N4O3S1	SULFAMETHOXYPYRIDAZINE SULFAMETHOXYPYRIDAZINE
4049	BENZENE	343	2	-0.57	0.82 A	C11H12N4O3S1	SULFAMETHOXYPYRIDAZINE
4050 4051	I-PENT. ACETATE CGL4	343 343	2	0.12 -2.52	-0.05 -0.25 A	C11H12N4O3S1 C11H12N4O3S1	SULFAMETHOXYPYRIOAZINE SULFAMETHOXYPYRIOAZINE
4052 4053	OCTANOL CHCL3	393 343	63 2	0.85 0.63	0.85 = 1.18 N	C11H12N4O3S1 C11H12N4O3S1	SULFAMONOMETHOXINE SULFAMONOMETHOXINE
4054	CHCL3	393	63	0.71	1.26 N 1.31 A	C11H12N4O3S1 C11H12N4O3S1	SULFAMONOMETHOXINE SULFAMONOMETHOXINE
4055 4056	BENZENE 1-BUTANOL	343 130	13	-0.10	0.34	C11H12N4O3S1	SULFAMONOMETHOXINE
4057 4058	I-PENT. ACETATE	343 343		1.17	1.03 1.25 A	C11H12N4O3S1 C11H12N4O3S1	SULFAMONOMETHOXINE SULFAMONOMETHOXINE
4059 4060	CYCLOHEXANE OCTANOL	304 10		3.27 2.33	2.33 =	C11H12O2 C11H12O3	CINNAMIC ACID, ETHYL ESTER 5-INDANOXYACETIC ACID
4061	N-BUTANOL	295	52	0.30	-0.08	C11H13CL1N2O2	TRYPTOPHANE HYDROCHLORIDE
4062 4063	CYCLOHEXANE CYCLOHEXANE	141 141		3.82 3.10		C11H13N102 C11H13N102	STYRENE,4-I-PROPYL,B-NITRO STYRENE,4-METHYL,B-NITRO,B-ETHYL
4064 4065	CYCLOHEXANE CHCL 3	141 67		3.61 -0.70		C11H13N102 C11H13N103	STYRENE, 2-METHYL, B-NITRO, B-ETHYL L-PHENYLALANINE, ACETYL
4066	CYCLOHEXANE	141		3.07		C11H13N1O3 C11H13N1O3	STYRENE, 2-ETHOXY, B-NITRO, B-METHYL STYRENE, 4-METHOXY, B-NITRO, B-ETHYL
4067 4068	CYCLOHEXANE CYCLOHEXANE	141 141		2.49 2.88		C11H13N1O3	STYRENE, 2-METHOXY, B-NITRO, B-ETHYL
4069 4070	CYCLOHEXANE CHCL3	141		2.88 -2.78		C11H13N103 C11H13N104	STYRENE,3-METHOXY,8-NITRO,B-ETHYL N-ACETYLTYROSINE/L/
4071 4072	ETHYL ACETATE DIETHYL ETHER	67 431		-0.15 -0.66	-0.21 -0.43 A	C11H13N1O4 C11H13N1O4	N-ACETYLTYROSINE/L/ BENZOYLTHREONINE
4073	CYCLOHEXANE	141		1.71	4.75	C11H13N1O4	STYRENE, 3,4-DIMETHOXY, B-NITRO, B-METHYL STYRENE, 2,5-DIMETHOXY, B-NITRO, B-METHYL
4074	CYCLOHEXANE	141		2.49		C11H13N104 C11H13N104	ST YRENE, 2, 4-DIMETHOXY, B-NITRO, B-METHYL
4076 4077		141		2.57 1.49		C11H13N1O4 C11H13N1O4	STYRENE, 2,3-DIMETHOXY, B-NITRO, B-METHYL STYRENE, 4-HYDROXY, 3-ETHOXY, B-NITRO, B-METHYL
4078 4079	CYCLOHEXANE	141 338		1.57	0.77 8	C11H13N1O4 C11H13N3O1	STYRENE,4-HYDROXY,3-METHOXY,8-NITRO,8-ETHYL 4-AMINOANTIPYRINE
4080	BENZENE	338	44	-0.92	0.11	C11H13N3O1	4-AMINOANTIPYRINE
	N-HEPTANÉ OCTANOL	338 393		-1.52 1.15	1.15 =	C11H13N3O1 C11H13N3O3S1	4-AMINDANTIPYRINE Sulfisoxazole
4083	OCTANOL CHCL3	56 343		1.01	1.01 = 1.19 N	C11H13N3O3S1 C11H13N3O3S1	SULFIS DXAZOLE SULFIS DXAZOLE
4085	CHCL3	393	63	0.94	1.35 N	C11H13N3O3S1 C11H13N3O3S1	SULFISOXAZOLE SULFISOXAZOLE
4086 4087	BENZENE	415 343	2	-0.07	1.34 A	C11H13N3O3S1	SULFISOXAZOLE
4088 4089	1-PENT. ACETATE CCL4	343 343		1.35 -1.48	1.22 0.61 A	C11H13N3O3S1 C11H13N3O3S1	SULFIS DXAZOLE SULFIS DXAZOLE
4090	N-FEPTANE N-HEPTANE	415 416	44	-3.57 0.98		C11H13N3O3S1 C11H14CL1N1O3	SULFISOXAZOLE P-AMINOSALICYLIC ACID, 4-CHLOROBUTYL ESTER
4092	N-HEPTANE	138		1.78	2.41 4	C11H14F3N1 C11H14I1N1O4S1	N-METHYLNORFENFLURAMINE N-(P-IODOBENZENESULFONYL) YALINE
4094	CHCL3	306		-0.32	1.57 A	C11H14I1N1O4S1	N- (P-IODOBENZENESUL FONYL) VAL INE
	CLCH2CH2CL CHCL3	306 306	12	1.60 1.38	2.41 A	C11H14I1N104S1 C11H14I1N104S2	N-(P-1000BENZENESULFONYL) YALINE N-(P-1000BENZENESULFONYL) METHIONINE
	CCL4	306 306		-0.58 1.30	1.35 A	C11H14I 1N1O4S2 C11H14I 1N1O4S2	N- (P-1000BENZENESUL FONYL )METHIONINE N- (P-1000BENZENESUL FOR PL )METHIONINE
4099 4100	OCTANOL	430 430	46	-0.69 -1.57	-0.69 =	C11H14N2.H3P04 C11H14N2O1.H3P04	5-METHYLTRYPTAMINE PHOSPHATE 5-METHOXYTRYPTAMINE PHOSPHATE
7100		-50					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

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NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAHE
4101	CYCLOHEXANE	141		2.56		C11H14N2O2	STYRENE.4-DIMETHYLAMINO.B-NITRO.B-METHYL
4102	CHCL3	399	1	2.15	1.62 8	C11H14N2O3	ALLOBARBITAL, N-METHYL
4103 4104	I-PENT. ACETATE	399 399	1	1.93 0.84	1.82	C11H14N2O3 C11H14N2O3	ALLOBARBITAL,N-METHYL ALLOBARBITAL,N-METHYL
41C5	MIXED SOLV#1	433	_	0.88		C11H14N2O3	ALLOBARBITAL, N-METHYL N-ACETYL-A-HYDROXYMETHYL-8-OH-4-NITROPHENETHYL AMINE
4106	OCTANOL OCTANOL	428 226		-0.03 0.09	-0.03 = 0.09 =	C11H14N2O5 C11H14N4O4S1	6-METHYLTHIO-9-B-D-RIBOFURANOSYL-9-H-PURINE (40774)
4108	QCTANOL	255		2.42	2.42 =	C11H1401	2-PENTANONE, 5-PHENYL
4109 4110	OCTANOL OCTANOL	255 255		2.77 2.77	2.77 = 2.77 =	C11H14O2 C11H14O2	ACETIC ACID, G-PHENYLPROPYL ESTER 4-PHENYLBUTYRIC ACID, METHYL ESTER
4111	OILS	362		0.84	1.98 A	C11H14O2	A-PHENYLVALERIC ACID
4112 4113	OILS	385 417		1.41 1.46	2.47 A 2.52 A	C11H14O2 C11H14O2	2-PHENYLVALERIC ACID 4-PHENYLVALERIC ACID
4114	OILS	361		1.03	2.19 A	C11H1402	5-PHENYLVALERIC ACID
4115 4116	OCTANOL OCTANOL	56 10		3.57 2.59	3.57 = 2.59 =	C11H14O3 C11H14O3	P-HYDROXYBENZOIC ACID, BUTYL ESTER PHENOXYACETIC ACID, 3-ISOPROPYL
4117	OCTANOL	10		2.69	2.69 =	C11H14O3	PHENDXYACETIC ACID, 4-ISOPROPYL
4118 4119	OCTANOL	10 345		2.71 0.63	2.71 = 1.76 A	C11H14O3 C11H15BR1N2O3	PHENOXYACETIC ACID,3-PROPYL BARBITURIC ACID,S-BUTYL,8-BROMDALLYL
4120	OILS OCTANOL	437		3.46	3.46 =	C11H15CL206P1S1	O.O-DIET-O-(2.6-CL2-4-MESULFONYLPHENYL)PHOSPHATE
4121	TOLUENE	150 396	21	3.28 2.28	4.45 A 1.73 B	C11H15N101 C11H15N101	N-BUTYL-SALICYLIDENEIMINE (SCHIFF BASE) PHENMETRAZINE
4122 4123	CHCL3 N-FEPTANE	396	31 31	0.32	14.13 5	C11H15N1O1	PHENMETRAZINE
4124	DLEYL ALCOHOL	390 418	44 3	2.77	3.31 3.72	C11H15N102 C11H15N102	P-AMINOBENZOIC ACID, BUTYL ESTER P-AMINOBENZOIC ACID, I-BUTYL ESTER
4125 4126	I-PENT. ACETATE I-PENT. ACETATE	418	3	3.76 3.78	3.74	G11H15N102	P-AMINDBENZOIC ACID, N-BUTYL ESTER
4127	I-PENT. ACETATE	418	3	3.58	3.52	C11H15N102	P-AMINOBENZOIC ACID, SEC-BUTYL ESTER P-AMINOBENZOIC ACID, T-BUTYL ESTER
4128 4129	I-PENT. ACETATE Hexane	418 391	3	3.08 1.09	3.01	C11H15N102 C11H15N102	N-METHYL CARBAMATE, 3-I-PROPYLPHENYL
4130	HEXANE	391		0.89		C11H15N102	N-METHYL CARBAMATE, 3, 4, 6-TRIMETHYL PHENYL N-METHYL CARBAMATE, 3, 4, 5-TRIMETHYL PHENYL
4131 4132	HEXANE OCTANDL	391 384		0.93 2.31	2.31 =	C11H15N102 C11H15N102	N-METHYL-2-I-PROPYLPHENYLCARBAMATE
4133	OCTANOL	384		2.40	2.40 =	C11H15N1O2	N-METHYL-2-PROPYLPHENYLCARBAMATE
4134 4135	OCTANOL OCTANOL	384 384		2.63 2.80	2.63 = 2.80 =	C11H15N1O2 C11H15N1O2	N-METHYL-3-I-PROPYLPHENYLCARBAMATE N-METHYL-4-I-PROPYLPHENYLCARBAMATE
4136	OCTANOL	255		-0.36	-0.36 =	C11H15N102	VALERIC ACID, 2-AMINO-5-PHENYL N-METHYL CARBAMATE, 3,5-DIMETHYL, 4-METHYLTHIOPHENYL
4137 4138	HEXANE N-HEPTANE	391 370	14	1.48		C11H15N1O2S1 C11H15N1O3	P-AMINOSALICYLIC ACID, N-BUTYL ESTER
4139	OCTANOL	384		1.52	1.52 =	C11H15N103	N-METHYL-2-I-PROPOXYPHENYLCARBAHATE
4140 4141	HEXANE N-HEPTANE	376 370	14	-0.14 0.18		C11H15N1O3 C11H15N1O4	N-METHYLCARBAMIC ACID.O-I-PROPOXYPHENYL ESTER P-AMINOSALICYLIC ACID.4-HYDROXYBUTYL ESTER
4142	CHCL3	322		-2.00	-1.25 N	C11H15N5O5	1-METHYLGUANOS INE
4143 4144	N-PEPTANE OCTANOL	421 437	44	2.69 2.92	2.92 =	Clihi6Clini Clihi6Cli04PiSi	G-(P-CHLOROPHENYL)-PROPYLDIMETHYLAMINE O+O-DIET-O-(3-CL-4-METHYLTHIOPHENYL)PHOSPHATE
4145	OCTANOL	349		2.20	2.20 #	C11H16N1O5P1	PHOSPHONATE,O-(P-NITROPHENYL)-O-PROPYL,ETHYL
4146 4147	OCTANOL OCTANOL	437 341	60	2.01 1.68	2.01 = 1.68 =	C11H16N1O6P1S1 C11H16N2	O,O-DIET-O-(2-NITRO-4-METHIOPHENYL)PHOSPHATE 4-(N,N-DIMETHYL)-3-PYRIDYLBUTENE-1-YLAMINE
4148	OCTANOL	341	60	0.96	0.96 =	C11H16N2	METHYL ANABAS IN E
4149 4150	PARAFFINS	316 341	60	0.55 1.34	1.34 =	C11H16N2 C11H16N2	4-(N-PIPERIDYL)-ANILINE 3-PYRIDYLETHYL-2-(N-PYRROLIDINE)
4151	OCTANDL N-HEPTANE	419	00	-0.92		C11H16N2O1	UREA, ETHYL-M-PHENETYL/UNSYM/
4152 4153	N-HEPTANE N-HEPTANE	419 419		-1.20 -1.07		C11H16N2O1 C11H16N2O1	UREA, ETHYL-O-PHENETYL/UNSYM/ UREA, ETHYL-P-PHENETYL/UNSYM/
4154	N-HEPTANE	419		-0.25		C11H16N2O1	UREA, N-BUTYL PHENYL-
4155 4156	N-PEPTANE N-HEPTANE	419 419		-0.28 -0.49		C11H16N2O1 C11H16N2O1	UREA, N-PROPYL, M-TOLYL- UREA, N-PROPYL, O-TOLYL-
4157	N-HEPTANE	419		-0.49		C11H16N2O1	UREA, N-PROPYL, P-TOLYL- N-METHYL CARBAMATE, 3-METHYL, 4-DIMETHYLA MINOPHENYL
4158 4159	HEXANE N-HEPTANE	391 400	14	0.12 -3.25		C11H16N2O2 C11H16N2O2	PILOCARPINE
4160	50%ETHER+5C%DMF	125		0.82	2.84	C11H16N2O2S1	5-ALLYL-5-I-BUTYL-2-THIOBARBITURIC ACID/BUTHALITAL/ 5-ALLYL-5-BUTYLBARBITURIC ACID
4161 4162	50%ETHER+50%DMF 50%ETHER+50%DMF	125 125		0.52 0.61	2.10 2.32	C11H16N2O3 C11H16N2O3	5-ALLYL-5-I-PR-1-METHYLBARBITURIC ACID
4163	OILS	345		0.39	1.55 A	C11H16N2O3	BARBITURIC ACID, ALLYL, S-BUTYL
4164 4165	HEXANE CHCL3	372 396	31	1.02 3.46	2.74 B	C11H16O1 C11H17N1	PENT ANOL , 5-PHENYL DI METHYL AMPHETAM IN E
4166	N-HEPTANE	396	31	2.03		C11H17N1	OIMETHYLAMPHETAMINE N-ETHYL-G-PHENYLPROPYLAMINE
4167 4168	DIETHYL ETFER CHCL3	374 396	31	1.80 3.25	2.44 B	C11H17N1 C11H17N1	ETHYLAMPHETAMINE
4169	N-HEPTANE	138		1.88		C11H17N1	ET HYL AMPHETAMINE
	N-HEPTANE CHCL3		31 31	1.59 2.94	2.29 B	C11H17N1 C11H17N1	ETHYLAMPHETAMINE MEPHENTERMINE
4172	N-HEPTANE	396	31	2.04	2.73 =	C11H17N1	MEPHENTERMINE G-Phenyl propyl dimethyl amine
	OCTANOL N-HEPTANE	255 421	44	2.73 2.03	2. /3 =	C11H17N1 C11H17N1	G-PHENYLPROPYLDIMETHYLAMINE
4175	XYLENE	422	• •	1.81	2.47 B	C11H17N1 C11H17N1O1	PROPYL AMINE,N-ME,N-(1-BENZYL) P-DIETHYLAMINOBENZYL ALCOHOL
	OCTANOL CHCL3	302 396	31	2.29 1.91		C11H17N101	METHYL EPHEDR INE
4178	N-HEPTANE	396		-0.04		C11H17N1O1	METHYLEPHEDRINE ADENINE,9-(1-HYDROXYMETHYL-PENTYL)
4179 4180	OCTANOL OCTANOL	397 437		1.16 2.24	1.16 = 2.24 =		O. O-DIETHYL-O-(4-METHYLTHIOPHENYL) PHOSPHATE
4181	OCTANDL	437		0.00	0.00 =	C11H17O6P1S1	O, O-DIETHYL-O-(4-METHYLSULFONYLPHENYL) PHOSPHATE BENZYLDIMETHYLETHYLAMMONIUM BROWIDE
4182	OCTANOL OCTANOL	65 65	46 53	-3.38 -2.03	-3.38 = -2.03 =	C11H18BR1N1 C11H18BR1N1	HEXYLPYRIDINIUM BROWIDE
4184	OCTANOL	341	60	1.23	1.23 =	C11H18N2	N, N-DIETHYL-3-PYRIDYLETHYLAMINE 4-(N.N-DIMETHYL)-3-PYRIDYLBUTYLAMINE
	OCTANOL N-HEPTANE	341 400		1.49	1.49 =	C11H18N2 C11H18N2O2.HBR	SPIRO-(N'-METHYLPIPERIDYL-4")-N-ETSUCCINIMIDE
4187	OCTANOL	218		2.98	2.98 = 2.95 N	C11H18N2O251	BARBITURIC ACID, 5-ETHYL-5-I-AHYL-2-THIO BARBITURIC ACID, 5-ETHYL-5-I-AHYL-2-THIO
	CHCL3 I-PENT. ACETATE	399 399	1	2.51 3.00	2.94	C11H18N2O2S1	SARSITURIC ACID. 5-ETHYL-5-I-AMYL-2-THIO
4190	CCL4	399 338	1 44	1.58 2.22	3.21 A 2.69 N	C11H18N2O2S1 C11H18N2O2S1	BARBITURIC ACID, S-ETHYL-S-I-AMYL-2-THIO BARBITURIC ACID, ET, 1-MEBU, 2-THIO/THIOPENTAL/
4192	CHCL3 OILS	442		1.95	2.96 A	C11H18N2O2S1	BARRITURIC ACID. ET. 1-MEBU. 2-THIO/THIOPENTAL/
4193	DILS	398 338		1.80	2.83 A	C11H18N2O2S1 C11H18N2O2S1	BARBITURIC ACID, ET, 1-MEBU, 2-THIO/THIOPENTAL/ BARBITURIC ACID, ET, 1-MEBU, 2-THIO/THIOPENTAL/
	N-HEPTANE	254		0.52		C11H18N2O2S1	BARBITURIC ACID. ET-1-MEBU. 2-THIO/THIOPENTAL/
	N-HEPTANE N-HEPTANE	338 340	44	0.19 0.52		Clihi8N2O2S1 Clihi8N2O2SI	BARBITURIC ACID. ET, 1-MEBU. 2-THIO/THIOPENTAL/ BARBITURIC ACID. ET, 1-MEBU. 2-THIO/THIOPENTAL/
4198	DCTANOL	218		2.24	2.24 =	C11H18N2O3	BARBITURIC ACID,5-AMYE*5-ETHYL BARBITURIC ACID,5-AMYL-5-ETHYL
4199 4200	OILS OCTANOL	345 399		0.46 2.07		C11H18N2O3 C11H18N2O3	BARBITURIC ACID, 5-ETHYL-5-I-AMYL/AMDBARBITAL/
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NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
4201	CHCL3	399	1	1.73	2.24 N	C11H18N2O3	BARBITURIC ACID, 5-ETHYL-5-I-AMYL/AMOBARBITAL/
4202	OILS	345	-	0.46	1.61 A	C11H18N2O3	BARBITURIC ACID, 5-ETHYL-5-I-AMYL/AMOBARBITAL/
4203	BENZENE	399	1	0.72	2.10 A	C11H18N2O3	BARBITURIC ACID, 5-ETHYL-5-I-AMYL/AMOBARBITAL/
4204	I-PENT. ACETATE	399	1	2.13	2.03	C11H18N2O3	BARBITURIC ACID, 5-ETHYL-5-I-AMYL/AMOBARBITAL/ BARBITURIC ACID, 5-ETHYL-5-I-AMYL/AMOBARBITAL/
4205 4206	CCL4 OCTANOL	399 399	1	0.34 2.03	2.22 A 2.03 =	C11H18N2O3 C11H18N2O3	BARBITURIC ACID: 5-ET-5-(1-MEBU)/PENTOBARBITAL
4207	CHCL3	399	1	1.38	1.90 N	C11H18N2O3	BARBITURIC ACID, 5-ET-5-(1-MEBU)/PENTOBARBITAL/
4208	OILS	345		0.64	1.77 A	C11H18N2O3	BARBITURIC ACID, 5-ET-5-(1-MEBU) / PENTOBARBITAL/
4209	OILS	398 399	44	0.76 0.51	1.88 A 1.90 A	C11H18N2O3 C11H18N2O3	BARBITURIC ACID, 5-ET-5-(1-ME BU)/PENTOBARBITAL/ BARBITURIC ACID, 5-ET-5-(1-MEBU)/PENTOBARBITAL/
4210 4211	BENZENE L-PENT. ACETATE	399	1	2.03	1.93	C11H18N2O3	BARBITURIC ACID. 5-ET-5-(1-MEBU)/PENTOBARBITAL/
4212	CCL4	399	î	-0.03	1.80 A	C11H18N2O3	BARBITURIC ACID, 5-ET-5-(1-MEBU)/PENTOBARBITAL/
4213	N-HEPTANE	340		-1.30		C11H18N2O3	BARBITURIC ACID.5-ET-5-(1-MEBU)/PENTOBARBITAL/ BARBITURIC ACID.5-ET-5-(1-MEBU)/PENTOBARBITAL/
4214 4215	50%ETHER+50%DMF OCTANOL	125 218		0.53	2.12 0.35 =	C11H18N2O3 C11H18N2O4	BARBITURIC ACID, 5-ETHYL-5(30H-1-METHYLBUTYL)
4216	OCTANOL	348		0.89	0.89 =	C11H19N102	N-HEXANOYL CYCLOBUTANEC ARBOXA MIDE
4217	CHCL3	424	46	-3.20		C11H2OI1N102	N-METHYL-I-QUINUCLIDINOL-3-ACETATE METHIODIDE
4218	CHCL3	424	46	-3.71 -3.09		C11H2O11N1O2	TROPINYL ACETATE-METHIODIDE/TRANS/ TROPINYL ACETATE-METHIODIDE/CIS/
4219 4220	CHCL3 SEC-BUTANOL	424 84	46 19	-1.31	-2.34	C11H21N505	ARGINYLGLUTAMIC ACID
4221	CHCL3	424	46	-3.28		C11H22I1N1O2	1. 2.6-TRIMETHYL-4-ACETYL PIPERIDINE METHIODIDE
4222	CHCL 3	424	46	-3.09	0 61 0	C11H22I1NLO2	1,3,5-TRIMETHYL-4-ACETYL PIPERIDINE METHIODIDE MORPHOLINOFORMIC ACID, DIETAMINOETHYL ESTER
4223 4224	DIETHYL ETHER PARAFFINS	378 241	44	-1.06 1.08	-0.01 8	C11H22N2D3 C11H22N2S1	N-OCTYL ETHYL ENETHIOUREA
4225	CHCL3	424	46	-2.70		C11H24I1N1	1, 2, 2, 6, 6-PENTAMETHYLPIPERIDINE METHIODIDE
4226	CHCL3	424	46	-2.52		C11H24[1N1	1,3,3,5,5-PENTAMETHYLPIPERIDINE METHIODIDE
4227	DIETHYL ETHER	378	44	-0.12	0.83 B	C11H24N2O2 C11H24N2O2	N-BUTYLCARBANIC ACID.DIETAMINOETHYL ESTER N-T-BUTYLCARBANIC ACID.DIETAMINOETHYL ESTER
4228 4229	DIETHYL ETHER DIETHYL ETHER	378 378	44 44	-1.02 -0.73	0.30 B	C11H24N2O2	N.N-DIETHYLCARBAMIC ACID.DIETAMINGETHYL ESTER
4230	DIETHYL ETHER	378	44	-1.07	0.00 B	C11H24N2O2	N-SEC-BUTYLCARBAMIC ACID, DIETAMINOETHYL ESTER
4231	OCTANOL	235		1.68	1.68 =	C11H24O2SN1	TRIPROPYLTIN ACETATE TRIMETHYL-OCTYL-AMMONIUM IODIDE
4232 4233	OCTANOL OCTANOL	297 297	46 46	-1.07 -2.19	-1.07 = -2.19 =	C11H26I1N1 C11H26I1N1	TRIPROPYL-ETHYL-AMMONIUM IDDIDE
4234	OCTANOL	298		4.24	4.24 =	C11H26SI1	SILANE. OCTYL-TRIMETHYL
4235	CYCLOHEXANE	304		1.96		C12H6F2N2	MALONONITRILE, 2,6-DIFLUOROCINNAMAL
4236	CYCLOHEXANE	304		1.96 0.81		C12H7CL1N2 C12H7CL2N1S1	MALONONITRILE: 2-CHLORDCINNAMAL PHENOTHIAZINE: 2: 7-DICHLORO
4237 4238	N-HEPTANE N-HEPTANE	443 443		0.83		C12H7GL2N1S1	PHENOTHIAZINE, 3, 7-DICHLORO
4239	CYCLOHEXANE	304		1.80		C12H7F1N2	MALONONITRILE. 2-FLUOROCINNAMAL
4240	CYCLOHEXANE	304		1.01		C12H7N3OZ	MALONONITRILE, 2-NITROCINNAMAL PHENOTHIAZINE, 3-BROMO
4241 4242	N-HEPTANE N-HEPTANE	443 443		3.60 3.32		C12H8BR1N1S1 C12H8CL1N1S1	PHENOTHIAZINE, 3-CHLORO
4243	HEXANE	317		5.00		C12H8CL6	ALDRIN
4244	HEXANE	317		4.56		C12H8CL601	DIELDRIN
4245	N-PEPTANE	443		3.61 3.95		C12H8F1N1S1 C12H8I1N1S1	PHENOTHIAZINE, 3-FLUORO PHENOTHIAZINE, 3-IODO
4246 4247	N-HEPTANE CYCLOHEXANE	443 141		1.87		C12H8N2	MALONONITRILE, CINNAMAL
4248	OCTANOL	283		1.83	1.83 =	C12H8N2.H2O	O-PHENANTHROL INE HYDRATE
4249	OCTANOL	218		2.84	2.84 =	C12H8N2	PHENAZINE MALONONITRILE,4-METHOXYCARBONYLBENZAL
4250 4251	CYCLOHEXANE CYCLOHEXANE	304 304		1.02		C12H8N2O2 C12H8N2O2	MALONONITRILE, 2-METHOXYCARBONYLBENZAL
4252	OCTANOL	218		4.12	4.12 =	C12H8O1	DIBENZOFURAN
4253	CYCLOHEXANE	141		0.67		C12H8O3	I, 4-NAPHTHOQUINONE, Z-ACETYL I, 4-NAPHTHOQUINONE, Z-METHOXYCARBONYL
4254 4255	CYCLOHEXANE CYCLOHEXANE	141 304		1.12 3.60		C12H8O4 C12H9CL2N1O2	ETHYLCYANOACETATE, 2, 6-DICHLOROBENZAL
4256	OCTANOL	309		3.29	3.29 =	C12H9N1	CARBAZOLE
4257	N-HEPTANE	443		-1.09		C12H9N101S1	PHENOTHIAZINE, 3-HYDROXY 1,4-NAPHTHOQUINONE, 2-ACETAMIDO
4258 4259	OCTANOL CYCLOHEXANE	141 141		1.29	1.29 =	C12H9N1O3 C12H9N1O3	1,4-NAPHTHOQUINONE, 2-ACETAMIDO
4260	OCTANOL	56		4.15	4.15 =	C12H9N1S1	PHENOTHIAZINE
4261	N-PEPTANE	443		3.88		C12H9N1S1	PHENOTHIAZINE
4262 4263	OCTANOL OCTANOL	283 283		0.41	0.41 = 0.22 =	C12H9NA101 C12H9NA101	SODIUM P-PHENYLPHENOXIDE (PKA=9.51) SODIUM P-PHENYLPHENOXIDE (PKA=9.51;PH=12.7)
4264	OCTANOL	56		4.09	4.09 =	C12H10	BIPHENYL
4265	OCTANOL	309		3.16	3.16 =	C12H10	BIPHENYL
4266	OCTANOL CYCLOHEXANE	428		4.04 2.97	4.04 =	C12H10CL1N1O2	DIPHENYL ET HYLCY AND ACET AT E, 2-CHLOROBENZAL
4267 4268	CYCLOHEXANE	304 304		3.54		C12H10CL1N102	ETHYLCYANOACETATE, 3-CHLOROBENZAL
4269	CYCLOHEXANE	304		3.55		C12H10CL1N102	ETHYLCYANOACETATE, 4-CHLOROBENZAL
4270	CYCLOHEXANE	141 304		1.24 2.18		C12H10CL1N102 C12H10CL2O2	1,4-NAPHTHOQUINONE,2-CHLORO,3-DIMETHYLAMINO ACETYLACETONE,2,6-DICHLORO-BENZAL
4271 4272	CYCLOHEXANE CYCLOHEXANE	304		2.75		C12H10F1N102	ETHYLCYANDACETATE, 3-FLUROBENZAL
4273	OCTANOL	10		3.82	3.82 =	C12H10N2	AZOBEN ZENE
4274	CYCLOHEXANE CYCLOHEXANE	304 304		2,55		C12H10N2 C12H10N2O1	MALONONITRILE, 2-ETHYLBENZAL MALONONITRILE, 4-ETHOXYBENZAL
4275 4276	CYCLUHEXANE	304		2.23		C12H10N201	MALONONITRILE, 3-ETHOXYBENZAL
4277	CYCLOHEXANE	304		2.70		C12H10N2O1	MALDNONITRILE, 2-ETHOXYBENZAL
4278		141		1.05		C12H10N2O2	MALONONITRILE, 3, 4-DIMETHOXYBENZAL MALONONITRILE, 2, 4-DIMETHOXYBENZAL
4279 4280		141 304		2.02 1.08		C12H10N2O2 C12H10N2O2	MALONONITRILE, 2, 4-DIMETHOXYBENZAL
4281	CYCLOHEXANE	141		-1.30		C12H10N2O3	1,4-NAPHTHOQUINONE,2-AMINO,3-ACETAMINO
4282	CYCLOHEXANE	304		1.74	2 30 **	C12H10N2O4	ETHYLCYANOACETATE, 3-NITROBENZAL
4283 4284		444 56		1.91 4.21	2.38 N 4.21 ±	C12H10N4C6S1 C12H10O1	N1-(3,5-DINITROPHENYL)SULFANILAMIDE DIPHENYL ETHER
4284		276		4.36	4.36 =	C12H1001	DI PHENYL ETHER
4286	CYCLOHEXANE	445		1.94		C12H1001	O-PHENYL PHENOL
4287		133 141		C.98 2.49		C12H10G1 C12H10G2	P-PHENYLPHENDL 1,4-NAPHTHOQUINONE, 6.7-DIMETHYL
4288 4289		141		2.70		C12H10O2	1,4-NAPHTHOQUINONE,2,3-DIMETHYL
4290	GCTANOL	186		2.40		C12H1002S1	SULFONE, DIPHENYL
4291	OCTANOL	10		2.53	2.53 =	C12H10O3	ACETIC ACID, 2-NAPHTHYLOXY 1, 4-NAPHTHOQUINONE, 2-METHYL-3-METHOXY
4292 4293		141		2.14		C12H10O3 C12H10O3	1,4-NAPHTHOQUINONE,2-METHYL,3-METHOXY
4294	CYCLOHEXANE	304		0.45		C12H10O4	COUMARIN+3-CARBOXYLIC ACID, ETHYL ESTER
4295	CYCLOHEXANE	141		1.09	3 47 1	C12H1004	1,4-NAPHTHOQUINONE,2,3-DIMETHOXY DIPHENYLSULFIDE
4296 4297		276 235		3.47 4.45	3.41 # 4.45 =	C12H10S1 C12H10S1	DIPHENYL SUL FIDE
4298	CHCL3	444	30	2.16	2.62 N	C12H118R1N2O2S1	N1-(3-BROMOPHENYL)SULFANILAMIDE
4299	CYCLOHEXANE	304		1.82	2.44 N	C12H11BR102 C12H11CL1N2O2S1	ACETYLACETONE,4-BROMO-BENZAL NI-(3-CHLOROPHENYL)SULFANILAMIDE
4300	CHCL 3	444	- 50	1.71	2 . TH N	CTENTICLIMENTSI	TE TE SHEDBORNERTE FOULT MITTERITOR

NO.	SOLVENT	REF F		LOGP SOLV	LOGP	EMPIRICAL FORMULA	NAME
4301	CYCLDHEXANE	304		1.67		C1ZH11CL102	ACETYLACETONE, 4-CHLORO-BENZAL
4302	CYCLOHEXANE	304		1.69		C12H11CL102	ACETYL ACETONE . 3-CHLORO-BENZAL
4303 4304	CYCLOHEXANE CYCLOHEXANE	304 304		1.99		C12H11CL102 C12H11F102	ACETYLACETONE, 2-CHLORO-BENZAL ACETYLACETONE, 4-FLUGRO-BENZAL
4305	CHCL3	444	30	2.47	2.71 N	C12H11I1N2O2S1	NI-(3-10DOPHENYL) SULFANILAMIDE
4306 4307	PARAFFINS PARAFFINS	316 316		2.10		C12H11N1 C12H11N1	Z-AMINOBIPHENYL 3-AMINOBIPHENYL
4308	PARAFFINS	316		1.74		C12H11N1	4-AMINOBIPHENYL
4309	DCTANOL	276 309		3.34 3.22	3.34 ± 3.22 =	C12H11N1 C12H11N1	DIPHENYLAMINE DIPHENYLAMINE
4310 4311	DCTANDL DCTANDL	235		3.50	3.50 =	C12H11N1	OI PHENYL AMINE
4312	CYCLOHEXANE	141		2.63		C12H11N1O2 C12H11N1O2	BENZALCYANDACETIC ACID.ETHYL ESTER BENZALCYANDACETIC ACID.ETHYL ESTER
4313 4314	CYCLOHEXANE HEXANE	304 391		2.59 0.42		C12H11N102	N-HETHYL CARBAMATE, 1-NAPHTHYL
4315	OCTANDL	384		2.36	2.36 =	C12H11N102	N-METHYL-A-NAPHTHYLCARBAMATE
4316 4317	OCTANOL DIETHYL ETHER	384 113		2.56 2.62	2.56 = 2.41 A	C12H11N102 C12H11N102S1	N-METHYL-B-NAPHTHYLCARBAMATE BENZENESULFANILAMIDE
4318	CHCL3	113		2.87	3.29 N	C12H11N102S1	BENZENESUL FANILANIDE
4319	HEXANE	376 72		1.96 3.50	2.98 B	C12H11N102S1 C12H11N3	N-ME-N-ACETYLCARBAMIC ACID, 4-BENZOTHIENYL ESTER P-AMINOAZOBENZENE
4320 4321	BENZENE CHCL3			2.44	2.88 N	C12H11N304S1	N1-(3-N1TROPHENYL) SUL FANILAMIDE
4322	CHCL3	444		1.52	2.02 N	C12H11N304S1	N1-(4-NITROPHENYL)SULFANILAMIDE PTERIDINE, 2, 4, 7-TRIAMINO-6-PHENYL
4323 4324	OCTANOL OCTANOL	21B 65		2.62	0.98 = -2.62 =	C12H11N7 C12H12BR1N1	BENZYL PYRIDINIUM BROMIDE
4325	CHCL3	444	30	1.45	1.96 N	C12H12N202S1	NI-PHENYLSULFANILAMIDE
4326 4327	OCTANOL CHCL 3	80 399		1.42 0.65	1.42 = 1.20 N	C12H12N2O3 C12H12N2O3	BARBITURIC ACID, 5-ETHYL-5-PHENYL/PHENOBARBITAL/ BARBITURIC ACID, 5-ETHYL-5-PHENYL/PHENOBARBITAL/
4328	OILS	82		0.23	1.43 A	C12H12N2O3	BARBITURIC ACID, 5-ETHYL-5-PHENYL/PHENOBARBITAL/
4329	OILS	345		0.13	1.37 A 1.19 A	C12H12N2O3 C12H12N2O3	BARBITURIC ACID, 5-ETHYL-5-PHENYL/PHENOBARBITAL/ BARBITURIC ACID, 5 ETHYL-5-PHENYL/PHENOBARBITAL/
4330 4331	OILS Benzene	398 399		0.00	1.40 A	C12H12N2O3	BARBITURIC ACID, 5-ETHYL-5-PHENYL/PHENOBARBITAL/
4332	I-PENT. ACETATE	399		1.54	1.42	C12H12N2O3	BARBITURIC ACID, 5-ETHYL-5-PHENYL/PHENOBARBITAL/ BARBITURIC ACID, 5-ETHYL-5-PHENYL/PHENOBARBITAL/
4333 4334	CCL4 OLEYL ALCOHOL	399 82		0.63 0.78	1.31 A 1.34	C12H12N2O3 C12H12N2O3	BARBITURIC ACID,5-ETHYL-5-PHENYL/PHENOBARBITAL/
4335	50%ETHER+50%DMF	125	12 -	0.07	0.62	C12H12N2O3	BARBITURIC ACID: 5-ETHYL-5-PHENYL/PHENOBARBITAL/
4336 4337	CYCLOHEXANE CYCLOHEXANE	304 304		·1.63		C12H12N2O3 C12H12O2	CYANDACETAMIDE, 3,4-DIMETHOXYBENZAL ACETYLACETONE, BENZAL
4338	DIETHYL ETFER	414		0.87	0.87 A	C12H12O5	ADIPIC ACID, A-KETO-G-PHENYL
4339	N-HEPTANE N-HEPTANE	441 441		2.13		C12H13CL1N2 C12H13F1N2	8-CHLORO-9-METHYLTETRAHYDRO-8-CARBOLINE 6-FLUORO-9-METHYLTETRAHYDRO-8-CARBOLINE
4340 4341	DCTANOL	206		4.27	4.27 =	C12H13F3N2	BENZIMIDAZOLE, 5-BUTYL-2-(TRIFLUOROMETHYL)
4342	CYCLOHEXANE	446		0.62		C12H13N1O1 C12H13N1O2	N-CYCLOPROPYLCINNAMAMIDE 1-CYCLOHEXENE, 4-NITRO, 5-PHENYL
4343 4344	CYCLOHEXANE OCTANOL	141 235		3.60 2.14	2.14 =	C12H13N102S1	VITAVAX
4345	OCTANOL	283		1.49	1.49 =	C12H13N3O2	ISOCARBOXAZIDE N~PROPYLQUINOLINIUM BROMIDE
4346 4347	OCTANOL OILS	65 447		·2.52 ·0.03	-2.52 = 1.22 A	C12H14BR1N1 C12H14BR1N103	A-BROMO-I-VALERYL-SALICYLAMIDE
4348	OILS	382		5.51	6.20 A	C12H14I2D3	BENZOIC ACID, 4-DH, 3,5-DI-10DO, AMYL ESTER BENZOIC ACID, 4-DH, 3,5-DI-10DO, E-DH-AMYL ESTER
4349 4350	OILS N-HEPTANE	382 441		2.76	3.70 A	C12H14I2O4 C12H14N2	9-METHYLTETRAHYDRO-8-CARBOLINE
4351	50%ETHER+50%DMF	125		0.13	1.12	C12H14N2O4	5-FURFURYL-5-I-PROPYLBARBITURIC ACID/DORMOVIT/ MALDNAMIDE, 2,4-DIMETHOXYBENZAL
4352 4353	CYCLOHEXANE MIXED SOLV#1	304 433		·2.81 ·2.70		C12H14N2O4 C12H14N2O5	BARBITURIC ACID, 1-CARBOXYMETHYL-5, 5-DIALLYL
4354	DCTANOL	56		0.27	0.27 =	C12H14N4O2S1	SULFAMETHAZINE
4355 4356	DIETHYL ETFER CHCL3	113 343		·0.06 0.73	0.08 A 0.39 B	C12H14N4O2S1 C12H14N4O2S1	SULFAMETHAZINE SULFAMETHAZINE
4357	CHCL3	113	15	0.66	0.33 B	C12H14N4O2\$1	SULFAMETHAZINE
4358 4359	BENZENE I-PENT. ACETATE	343 343		0.43	0.03 B 0.40	C12H14N4O2S1 C12H14N4O2S1	SULFAMETHAZINE SULFAMETHAZINE
4360	CCL4	343	2 -	1.35	0.72 A	C12H14N4O2S1	SULFAMETHAZINE
4361 4362	OCTANOL Diethyl ether	393 113		·0.30 ·1.06	-0.30 = 0.71 B	C12H14N4O2S1 C12H14N4O2S1	SULFISCHIDINE SULFISCHIDINE
4363	CHCL3	343		-0.55	0.09 N	C12H14N402S1	SULFISOMIDINE
4364	CHCL3	113 393		·0.69 ·0.35	-0.04 N -0.33 N	C12H14N4O2S1 C12H14N4O2S1	SULFISOMIDINE SULFISOMIDINE
4365 4366	CHCL3 CHCL3	415		-0.52	0.12 N	C12H14N4O2S1	SULFISOMIDINE
4367	BENZENE	343		1.21	0.18 A	C12H14N4O2S1	SULFISOMIDINE
4368 4369	I-BUTANOL I-PENT. ACETATE	130 343		1.74	1.94 -0.59	C12H14N4O251 C12H14N4O253	SULFISOMIDINE SULFISOMIDINE
4370	CCL4	343	2 -	1.89	0.25 A	C12H14N4O251	SULFISOMIDINE
4371 4372	N-FEPTANE OCTANOL	415 393		3.85 1.56	1.56 =	C12H14N4O2S1 C12H14N4O4S1	SULFISOMIDINE SULFADIMETHOXINE
4373		343	2	1.49	2.01 N	C12H14N4O4S1	SULFADIMETHOXINE
4374 4375	CHCL3 BENZENE	393 343		1.31	1.31 B 2.08 A	C12H14N4O4S1 C12H14N4O4S1	SULFADIMETHOXINE SULFADIMETHOXINE
4376	I-BUTANOL	130	13	2.48	2.93	C12H14N4O4S1	SULFADIMETHOXINE
4377	I-PENT. ACETATE	343		1.89	1.78 1.31 A	C12H14N4O451 C12H14N4O451	SULFADIMETHOXINE SULFADIMETHOXINE
4378 4379	CCL4 DCTANOL	343 134		-0.63 1.73	1.73 =	C12H14N5O1	3-PHENYLAMINO-4-AMINO-6-I-PR-1,2,4-TRIAZINE-5-ONE
4380		10		2.67	2.67 =		2-(5-6-7-8-TETRAHYDRONAPHTHYLOXY-)ACETIC ACID ADIPIC ACID, B-PHENYL
4381 4382		194 438		0.60	0.67 A	C12H14G4 C12H15CL1O6	GLUCOPYRANOSIDE, 4-CHLOROPHENYL (BETA)
4383	DCTANOL	438		0.27	0.27 =	C12H151106	GLUCOPYRANOSIDE, 2-IODOPHENYL (BETA) GLUCOPYRANOSIDE, 4-IODOPHENYL (BETA)
4384 4385		438 376		0.75	0.75 =	C12H151106 C12H15N102	N-MECARBAMIC ACID, 5, 6, 7, 8-TETRAHYDRO-1-NAPHTHYL ESTER
4386	CYCLOHEXANE	141		3.52		C12H15N102	STYRENE, 4-1-PROPYL, 8-NITRO, 8-METHYL N-METHYL CARBAMATE, N-ACETYL, 3-ME-4-METHYLTHI OPHENYL
4387 4388	HEXANE CYCLOHEXANE	391 141		2.20		C12H15N102S1 C12H15N104	ST YRENE, 3, 4-DIMETHOXY, B-NITRO, B-ETHYL
4389	CYCLOHEXANE	141		2.68		C12H15N1O4	STYRENE, 2, 4-DIMETHOXY, 8-NITRO, 8-ETHYL
4390		141		2.68 3.22		C12H15N104 C12H15N104	STYRENE, 2, 5-DIMETHOXY, B-NITRO, B-ETHYL STYRENE, 2, 3-DIMETHOXY, B-NITRO, B-ETHYL
4391 4392	CYCLOHEXANE CYCLOHEXANE	141		2.24		C12H15N104	STYRENE, 4-HYDROXY, 3-ETHOXY, 8-NITRO, 8-ETHYL
4393	OCTANOL	438 438	-	0.59	-0.59 = -0.39 =	C12H15N108 C12H15N108	GALACTOPYRANOSIDE, 4-NITROPHENYL (BETA) GLUCOPYRANOSIDE, 4-NITROPHENYL (ALPHA)
4394 4395	OCTANOL OCTANOL	438		-0.78	-0.78 =	C12H15N1O8	GLUCOPYRANOSIDE, 2-NITROPHENYL (BETA)
4396	OCTANOL	438	-	-0.51 -0.44	-0.51 = -0.44 =	C12H15N108 C12H15N108	GLUCOPYRANOSIDE, 3-NITROPHENYL (BETA) GLUCOPYRANOSIDE, 4-NITROPHENYL (BETA)
4397 4398	OCTANOL	438 438	-	-0.18	-0.18 =	C12H15N1O8	MANNOPYRANOSIDE, 4-NITROPHENYL(ALPHA)
4399	MIXED SOLV#1	433	-	-0.82		C12H15N3O4 C12H16BR1N1O2	BARBITURIC ACID, 1-CARBANYLMETHYL-5, 5-DIALLYL A-BRONO-1-VALERYL-O-ANISIDINE
4400	OILS	447	-	-0.02	A CS A	ASTISABUSINERS.	representation to the second territories and territo

NO.	SOLVENT	REF	FOOT NOTE	LDGP SOLV	LOGP OCT.	EMPIRICAL FORMULA	NAME
4401	N-HEPTANE	416	14	1.12		C12H16CL1N103	P-AMINOSALICYLIC ACID, 5-CHLORDANYL ESTER
4402	CHCL3	396		3.22	2.53 B	C12H16F3N1	FENFLURAMINE FENFLURAMINE
4403 4404	N-HEPTANE N-HEPTANE	138 396	31	2.74 2.83		C12H16F3N1 C12H16F3N1	FENFLURANINE
4405	CCL4	306		0.20	2.02 A	C12H1611N1O451	N-(P-IODOBENZENESULFONYL)-I-LEUCINE
4406 4407	CCL4 OCTANOL	306 341		D.09 1.49	1.92 A 1.49 =	C12H1611N1O4S1 C12H16N2	N-(P-IODOBENZENESULFONYL)LEUCINE 3-PYRIOYLMETHYL-N-PIPERIDINE
4408	CHCL 3	448	65	-1.22		C12H16N2D2	N, N-DIMETHYLTRYPTAMINE. 5-HYDROXY
4409 4410	CHCL3 OCTANOL	448 218		0.74 1.20	1.20 =	C12H16N2O2 C12H16N2O3	N,N-DIMETHYLTRYPTAMINE, 4~HYORDXY CYCLOBARBITAL
4411	50%ETHER+50%DMF	125		0.15	1.17	C12H16N2O3	CYCLOBARBITAL
4412	OCTANOL	218 399		1.49	1.49 =	C12H16N2O3 C12H16N2O3	HEXOBARBITAL HEXOBARBITAL
4413 4414	CHCL3 I-PENT. ACETATE	399	1	2.11 1.86	1.58 B 1.75	C12H16N2O3	HEXOBARBITAL
4415	CCL4	399	1	0.88		C12H16N2O3	HEXOBARBITAL
4416 4417	50%ETHER+50%DMF Sec-butanol	125 84	12	0.46 -2.05	1.95 -3.38	C12H16N2O3 C12H16N6O3	HEXOBARBITAL HISTIDYLHISTIDINE
4418	OILS	361	• •	1.25	2.40 A	C12H1602	6-PHENYLCAPROIC ACID
4419 4420	OCTANOL OCTANOL	10 10		3.18 3.12	3.18 = 3.12 =	C12H16O3 C12H16O3	PHENDXYACETIC ACID,3-BUTYL PHENDXYACETIC ACID,4-5-BUTYL
4421	OCTANGL	10		2.96	2.96 -	C12H16U3	PHENOXYACETIC ACID.3-T-BUTYL
4422	OCTANOL FILED	438		-0.71	-0.71 =	C12H16D6	GLUCOPYRANOSIDE, PHENYL (BETA) B-D-GLUCOPYRANOSIDE, P-HYDROXYPHENYL/ARBUTIN/
4423 4424	DIETHYL ETPER OCTANOL	438		-3.13 -1.35	-2.62 A -1.35 =	C12H16O7 C12H16O7	B.D-GLUCOPYRANOSIDE,P-HYDROXYPHENYL/ARBUTIN/
4425	I-BUTANOL	4		-0.55	-1.28	C12H1607	B. D-GLUCOPYRANOS IDE.P-HYDROXYPHENYL/ARBUTIN/
4426 4427	50%ETHER+50%OMF CHCL3	125 396		0.46 3.38	1.95 2.66 B	C12H17BR1N2O3 C12H17N1O1	5-(2-BROMALLYL)-5-(1-METHYLBUTYL)-BARBITURIC ACID PHENDIMETRAZINE
4428	N-HEPTANE	396		0.95	2400 5	C12H17N101	PH ENDIMETRAZ IN E
4429	I-PENT. ACETATE	418	3	4.41	4.40	C12H17N1O2 C12H17N1O2	P-AMINDBENZOIC ACID,N-AMYL ESTER P-AMINDBENZOIC ACID,PENTYL ESTER
4430 4431	OLEYL ALCOHOL Hexane	390 376	44	3.24 1.79	3.78	C12H17N102	N. N-DINETHYLCARBANIC ACID. M- I-PROPYLPHENYL ESTER
4432	HEXANE	391		1.56		C12H17N1D2	N-METHYL CARBAMATE.3-I-PROPYL.5-METHYLPHENYL
4433 4434	HEXANE HEXANE	391 391		1.54		C12H17N102 C12H17N102	N-METHYL CARBAMATE,3-S-BUTYLPHENYL N-METHYL CARBAMATE,3-T-BUTYL PHENYL
4435	DCTANOL	384		2.78	2.78 -	C12H17N102	N-METHYL-2-S-BUTYLPHENYLCARBAMATE
4436	OCTANOL	384		2.65	2.65 =	C12H17N102 C12H17N102	N-METHYL-2-T-BUTYLPHENYLCARBAMATE N-METHYL-3-METHYL-4-I-PROPYLPHENYLCARBAMATE
4437 4438	OCTANOL OCTANOL	384 384		3.11 3.10	3.11 = 3.10 =	C12H17N102	N-METHYL-3-METHYL-5-I-PROPYLPHENYLCARBAMATE
4439	OCTANOL	384		2.84	2.84 =	C12H17N102	N-METHYL-3-METHYL-6-I-PROPYLPHENYLCARBAMATE
4440 4441	OCTANOL OCTANOL	384 384		2.93 3.20	2.93 = 3.20 =	C12H17N102 C12H17N102	N-METHYL-3-T-BUTYLPHENYLCARBAMATE N-METHYL-4-S-BUTYLPHENYLCARBAMATE
4442	OCTANOL	384		3.06	3.06 =	C12H17N102	N-METHYL-4-T-BUTYL PHENYL CARBAMA TE
4443 4444	OLEYL ALCOHOL N-HEPTANE	142 370		1.47	2.02	C12H17N1O2 C12H17N1O3	PHENDXYACETAMIDE,N,N-DIETHYL P-AMINOSALICYLIC ACID,N-AMYL ESTER
4445	OCTANOL	384		2.96	2.96 =	C12H17N1O3	N-METHYL-3-BUTOXYPHENYLCARBAMATE
4446	N-KEPTANE	370 438		0.28	-2.67 =	C12H17N104 C12H17N106	P-AMINOSALICYLIC ACID, 5-HYOROXYAMYL ESTER GLUCOPYRANOSIDE, 4-AMINOPHENYL (BETA)
4447 4448	OCTANOL OCTANOL	438		-1.23	-1.23 =	C12H17N106	GLUCOPYRANOSIDE, 2-AMINOPHENYL (BETA)
4449	OCTANOL	341	60	1.66	1.66 =	C12H18N2	3-PYRIDYLETHYL-2-(N-PIPERIDINE)
4450 4451	N-HEPTANE N-HEPTANE	400 419		-1.40 0.35		C12H18N2O1.HCL C12H18N2O1	OXO-TREMORINE UREA,N-BUTYL,O-YOLYL-
4452	N-HEPTANE	419		0.12		C12H18N2O1	UREA, N-BUTYL, P-TOLYL-
4453 4454	OCTANOL DILS	449 449		1.95	1.95 = 2.01 A	C12H18N2O2 C12H18N2O2	BENZOIC ACIO, P-ME-AMINO, N, N-DIMETHYLAMINOETHYL ESTER BENZOIC ACID, P-ME-AMINO, N, N-DIMETHYLAMINOETHYL ESTER
4455	XYLENE	449		1.38		C12H18N2O2	BENZOIC ACID, P-ME-AMINO, N., N-DIMETHYLAMINDETHYL ESTER
4456 4457	DI-BUTYL ETHER CHCL3	449 399	1	1.01 2.84	3.30 N	C12H18N2O2 C12H18N2O2S1	BENZOIC ACID, P-ME-AMINO, N, N-DIMETHYLAMINOETHYL ESTER BARBITURIC ACID, 5-ALLYL-5-I-AMYL, 2-THID
4458	I-PENT. ACETATE	399	ı	3.23	3.17	C12H18N2O2S1	BARBITURIC ACID, 5-ALLYL-5-I-AMYL,2-THIO
4459	CCL4	399 218		1.84	3.43 A 3.23 =	C12H18N2O2S1 C12H18N2O2S1	BARBITURIC ACID,5-ALLYL-5-I-AMYL,2-THIO BARBITURIC ACID,5-ALLYL-5-(1-MEBUTYL)2-THIO
4460 4461	DCTANOL DLEYL ALCOHOL	142		3.23 2.50	3.04	C12H18N2O2S1	BARBITURIC ACID, 5-ALLYL-5(1-MEBUTYL), 2-THIO
4462	CHCL3	399		2.27	2.75 N	C12H18N2O2S1 C12H18N2O2S1	BARBITURIC ACID, 5-(CYCLOHEX-1-YL), 5-ET, 2-THIO (1)
4463 4464	1-PENT. ACETATE	399 399		2.75	2.67 2.80 A	C12H18N2O2S1	BARBITURIC ACID,5-{CYCLOHEX-1YL)-5-ET-2-THIO BARBITURIC ACID,5-(CYCLOHEX-1-YL),5-ET,2-THIO (1)
4465	50%ETHER+50%DMF	125		0.62	2.34	C12H18N2O3	BARBITURIC ACID, 5-ALLYL-5-(1-MEBUTYL)/SECOBARBITAL/
4466 4467	PRIM. PENTANOLS CHCL3	181 396		-0.15 3.68	2.92 B	C12H19CL1N4O7P2S1 C12H19N1	THIAMINE PYROPHOSPHATE /COCARBOXYLASE/ METHYLETHYLAMPHETAMINE
4468	N-HEPTANE	396	31	2.22		C12H19N1	METHYL ETHYL AMPHETAMINE
	DIETHYL ETFER CHCL3	374 396		2.11 3.91		C12H19N1 C12H19N1	N-PROPYL-G-PHENYLPROPYLAMINE PROPYLAMPHETAMINE
4471	N-HEPTANE	1 38		2.56		C12H19N1	PROPYL AMPHETAM INE
4472 4473	N-FEPTANE CHCL3	396 396		2.49 3.65	2.00 R	C12H19N1 C12H19N1	PROPYLAMPHETAMINE I-PROPYLAMPHETAMINE
4474		396		2.07	2.90 0	C12H19N1	I-PROPYL AMPHET AM INE
4475		227		0.06		C12H19N3O1.H1CL1	PROCARBAZINE HYDROCHLORIDE (77213)(PKA= 6.66) O.O-DIETHYL-O-(3-ME-4-METHIOPHENYL)PHOSPHATE
4476 4477		437 437		2.73 2.82		C12H19O4P1S1 C12H19O6P1S1	O.O-DIETHYL-O-(2-ME-4-MESULFONYLPHENYL)PHOSPHATE
4478	DC TANOL	255		-2.02		C12H2OI1N1	G-PHENYLPROPYL-TRIMETHYL-AMMONIUM IODIDE
4479 4480		341 341		2.27	1.46 =	C12H2ON2 C12H2ON2	N, N-DI-I-PROPYL-3-PRYIOYLMETHYLAMINE N, N-DIPROPYL-3-PYRIOYLMETHYLAMINE
4481	CHCL3	322		2.00	2.38 N	C12H20N2D2S2	BARBITURIC ACID, 5-(1-MEBU)-5-(2-METHID)-2-THIO
	OILS CHCL3	442 399		2.04 2.74		C12H2ON2O2S2 C12H2ON2O3	BARBITURIC ACID, S-(1-MEBU)-5-(2-METHIO)-2-THIO BARBITURIC ACID, 5-ET-5-I-AMYL-N-METHYL
4484	I-PENT. ACETATE	399	i	2.61	2.52	C12H2ON2O3	BARBITURIC ACID, 5-ET-5-1-AMYL-N-METHYL
	CCL4 Diethyl ether	399		1.95	0 47 4	C12H2ONZO3	BARBITURIC ACID, 5-ET-5-1-AMYL-N-METHYL
4486		3 2		0.65 -0.30		C12H2O07 C12H2O07	CITRIC ACID, TRIETHYL ESTER CITRIC ACID, TRIETHYL ESTER
4488	PRIM. PENTANOLS	263		0.41	0.13	C12H21N6D6CD1	TRI-(2,3-BUTANEDIONEOXIME) COBALT
4489 4490	OCTANDL I-BUTANOL	438 4		-0.63 -2.40	-0.63 = -3.88	C12H22O6 C12H22O11	GLUCOPYRANOSIDE,CYCLOHEXYL (BETA) MALTOSE
4491	I-BUTANOL	4		-2.25	-3.67	C15H55011	SUCROSE
4492 4493	OCTANOL DIETHYL ETHER	260 378		1.72		C12H23N101 C12H24N2O2	2-AZATRIDECANONE PIPERIDINYL FORMIC ACID.OIETAMINOETHYL ESTER
4494	DCTANOL	218	26	4.20		C12H24O2	DODECANOIC ACID/LAURIC ACID/
4495 4496	N-KEPTANE Sec-Butanol	139 84		3.03 -0.75	-1.56	C12H24O2 C12H25N5O3	DODECANDIC ACID/LAURIC ACID/ ARGINYLLEUCINE
4457	OCTANOL	268	32	1.60	1.60 =	C12H25NA104S1	DODECYL SULFATE, SODIUM SALT
4498 4499	N-BUTANOL Octanol	450 218		0.25 5.13	-0.13 5.13 =	C12H26N4O6 C12H26O1	NEAMINE/NEOMYCIN A/(AS 2-ETHYL BUTYRATE) 1-DODECANOL
4500		210		-1.21		C12H2605	TETRAETHYLENE GLYCOL DIETHYL ETHER

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NO.	SOLVENT	REF	FDOT	LOGP	LOGP	EMPIRICAL	NAME
			NOTE	SOLV	OCT	FORMULA	
4501	CHCL3	451	12	2.05	1.52	C12H27N1	TRIBUTYLAMINE
4502	TOLUENE	452		0.58	1.04 B	C12H27O1P1	TRIBUTYL PHOSPHINE OXIDE
4503 4504	OCTANOL 50%ETHER+50%DMF	268 125		1.85 0.34	1.85 = 1.65	C12H28CL1N1 C13N14N2O3	DODECYLAMINE HYDROCHLORIDE BARBITURIC ACID, 5-ETHYL-5-PHENYL-N-METHYL
45C5	CYCLOHEXANE	304		2.28	2000	C13H7F3N2	MALDNONITRILE, 2-TRIFLUOROMETHYLCINNAMAL
4506 4507	CYCLOHEXANE OCTANOL	304 427		2.98 3.40	3.40 =	C13H8O1 C13H9N1	9-FLUOR ENDNE ACRIDINE
4508	DILS	453	50	2.30	3.29 A	C13H9N1	ACRIDINE
4509 4510	OCTANOL OCTANOL	283 283	71 72	-0.27 0.77	-0.27 = 0.77 =	C13H9NA102 C13H9NA102	P-BIPHENYLCARBOXYLIC ACID, SODIUM SALT BIPHENYLCARBOXYLIC ACID, SODIUM SALT
4511	OCTANOL	283		-0.38	-0.38 =	C13H9NA102	BIPHENYLCARBOXYLIC ACID, SODIUM SALT
4512	OCTANOL	216		-0.50	-0.50 =	C13H10CL1N1 C13H10CL1N101S1	ACRIDINE HYDROCHLORIDE PHENOTHIAZINE, Z-CHLORO, 7-METHOXY
4513 4514	N-FEPTANE OCTANOL	443 218		1.42	4.70 =	C13H10CL2N2O1	UREA, 1-(3, 4-DICHLOROPHENYL)-3-PHENYL
4515	OCTANOL	346		2.47	2.47 =	C13H10N2	1-AMINGACRIDINE 1-AMINGACRIDINE
4516 4517	OILS OCTANOL	453 346		1.79 2.62	2.92 A 2.62 =	C13H10N2 C13H10N2	2-AMINOACRIDINE
4518	OILS	453		1.97	3.08 A	C13H10N2	2-AMINDACRIDINE
4519 4520	OCTANOL DILS	346 453		2.19 1.87	2.19 = 3.00 A	C13H10N2 C13H10N2	3-AMINOACRIDINE 3-AMINOACRIDINE
4521	OCTANOL	346		3.26	3.26 =	C13H10N2	4- AMINDACRIDINE
4522 4523	OILS OCTANOL	453 216	12	3.08 2.74	4.00 A 2.74 =	C13H10N2 C13H10N2	4-AMINOACRIDINE 9-AMINOACRIDINE
4524	PARAFFINS	439		0.85		C13H10N2	9-AMINOPHENANTHRIDINE
4525 4526	CYCLOHEXANE OCTANOL	304 218		1.29 0.33	0.33 =	C13H10N2O2 C13H10N2O4	ETHYLCYANOACETATE, 4-CYANOBENZAL PHTHALIMIDE, N-(2,6-DIO XO-3-PIPERIDYL)
4527	OCTANOL	235		3.18	3.18 =	C13H10O1	BENZOPHENONE
4528 4529	OCTANOL CHCL3	235 388		3.18 3.90	3.18 = 4.76 A	C13H1001 C13H1002SE1	BENZOPHENONE 1-(2-5 EL ENOPHEN-YL)-3-PHENYL-1,3-PROPANEDIONE
4530	BENZENE	388		3.66	4.94 A	C13H1002SE1	1-(2-SELENOPHEN-YL)-3-PHENYL-1,3-PROPANEDIONE
4531 4532	TOLUENE TOLUENE	148 148		2.52 0.81	2.50 B 1.21 B	C13H11CU1N401 C13H11HG1N401	CUPROUS-CARBAZONE COMPLEX MERCURIC-CARBAZONE COMPLEX
4533	TOLUENE	148		2.00	2.10 B	C13H11HG2N401	MERCUROUS-CARBAZONE COMPLEX
4534	PARAFFINS OCTANOL	316 56		1.76	2.62 =	C13H11N1 C13H11N101	2-AMINOFLUORENE BENZANILIDE
4535 4536	OCTANOL	9	26	2.62 3.09	3.09 =	C13H11N101	SALICYLALDEHYDE-ANIL
4537	N-HEPTANE	443		2.43	3.27 =	C13H11N101S1 C13H11N102	PHENOTHIAZINE,3-METHOXY SALICYLANILIDE
4538 4539	OCTANOL N-HEPTANE	238 443		3.27 3.23	3.21 -	C13H11N1S1	PHENOT HIAZINE, 3-METHYL
4540	N-HEPTANE	443		4.58	1 10 -	C13H11N1S1	PHENOTHIAZINE, 10-METHYL 2, 8-DIAMINDACRIDINE
4541 4542	OCTANOL OCTANOL	346 235		1.10	1.10 = 4.14 =	C13H11N3 C13H12	DIPHENYLMETHANE
4543	CYCLOHEXANE	304		1.91		C13H12CL2O3	ETHYLACETOACETATE, 2,6-DICHLOROBENZAL
4544 4545	CYCLOHEXANE CYCLOHEXANE	304 304		2.98 4.00		C13H12CL2O3 C13H12CL2O3	EYHYLACETOACETATE, 2,4-DICHLOROBENZAL ETHYLACETDACETATE, 3,4-DICHLOROBENZAL
4546	CYCLOHEXANE	304		3.33		C13H12N2O1	MALONONITRILE, 2-1-PROPOXYBENZAL
4547 4548	TOLUENE CCL4	454 454		1.59		C13H12N4O1 C13H12N4O1	DIPHENYL CARBAZONE DIPHENYL CARBAZONE
4549	CHCL 3	455	1.2	5.90		C13H12N4S1	DIPHENYLTHIOCARBAZONE/DITHIZONE/
4550 4551	CCL4 OCTANOL	203 276		2.03	2.03 =	C13H12N4S1 C13H12O1	DIPHENYLTHIOCARBAZONE/DITHIZONE/ DIPHENYLCARBINOL
4552	OCTANOL	428		2.67	2.67 =	C13H12O1	DIPHENYLCARBINOL
4553 4554	HEXANE CYCLOHEXANE	456 304		0.56 2.23		C13H12O3 C13H13F1O3	GR IS AN-3, 4°-D IONE ETHYLACETDACETATE, 3-FL UOROBENZAL
4555	CYCLOHEXANE	304		3.26		C13H13N1O2	ETHYLCYANDACETATE, 2-METHYLBENZAL
4556 4557	CYCLOHEXANE HEXANE	304 376		3.62 2.45		C13H13N1O2 C13H13N1O251	ETHYLCYANDACETATE,4-METHYLBENZAL N-ME-N-PROPIONYLCARBAMIC ACID,4-BENZOTHIENYL ESTER
4558	DIETHYL ETHER	113		0.67	0.70 A	C13H13N102S1	N-P-TOLUENE BENZENE SUL FON AMIDE
4559 4560	CHCL3 CYCLOHEXANE	113 304		0.43 2.47	1.77 A	C13H13N10251 C13H13N103	N-P-TOLUENEBENZENESULFONAMIDE ETHYLCYANDACETATE,4-METHOXYBENZAL
4561	CYCLOHEXANE	304		2.68		C13H13N1O3	ETHYLCYANDACETATE, 2-METHOXYBENZAL
4562 4563	CYCLOHEXANE OCTANOL	304 65		2.80 -2.35	-2.35 =	C13H13N1O3 C13H14BR1N1	ETHYLCYANDACETATE,3-METHOXY8ENZAL B-PHENYLETHYLPYRIDINIUM BROMIDE
4564	DIETHYL ETHER	457	62	0.39	0.46 A	C13H14N2O2	1,4-NAPHTHOQUINONE,2-I-PROPYLHYDRAZINO
4565 4566	CHCL3 CHCL3	444 399	30 1	2.00 1.98	2.47 N 1.37 B	C13H14N2O2S1 C13H14N2O3	NI-(4-METHYLPHENYL)SULFANILAMIDE BARBITURIC ACID,1-ME,5-ET.5-PHENYL
4567	I-PENT. ACETATE	399	i	1.75	1.64	C13H14N2O3	BARBITURIC ACID.1-ME.5-ET.5-PHENYL
4568 4569	CCL4 CHCL3	399 444	1 30	0.80 1.64	2.13 N	C13H14N2O3 1 C13H14N2O3S1	BARBITURIC ACID, 1-ME, 5-ET, 5-PHENYL N1-(3-METHOXYPHENYL) SULFANILAMIDE
4570	CYCLOHEXANE	304		1.52		C13H14O2	ACETYLACETONE, 2-METHYL BENZAL
4571 4572	CYCLOHEXANE CYCLOHEXANE	304 304		1.57		C13H1402 C13H1403	ACETYLACETONE, 4-METHYL BENZAL ACETYLACETONE, 4-METHOXY-BENZAL
4573	CYCLOHEXANE	304		1.04		C13H14D3	ACETYL ACETONE, 2-METHOXY-BENZAL
4574 4575	CYCLOHEXANE CYCLOHEXANE	304 304		1.06 2.03		C13H14O3 C13H14O3	ACETYLACETONE, 3-METHOXY-BENZAL ETHYLACETOACETATE, BENZAL
4576	OCTANOL	438		0.49	0.49 =	C13H15F3G6	GLUCOPYRANOSIDE, 3-TRIFLUOROMETHYLPHENYL (BETA)
4577 4578		218 376		1.90	1.90 =	C13H15N1O2 C13H15N1O2	GLUTARIMIDE, 2-ETHYL-2-PHENYL N-MECARBAMIC ACID.O-CYCLOPENTENYLPHENYL ESTER
4579	CHCL3	67		-0.84		C13H15N105	D. L-TYROSINE, O, N-DIACETYL
4580 4581	CHCL3 BENZENE	338		0.18	-0.08 B	C13H15N3O2 C13H15N3O2	N-ACETYL-4-AMINOANTIPYRINE N-ACETYL-4-AMINOANTIPYRINE
4582		338		-2.40		C13H15N302	N-ACETYL-4-AMINOANTIPYRINE
4583 4584	OILS OILS	382 382		6.02 3.30	6.66 A 4.19 A	C13H16 I2O3 C13H16 I2O4	BENZOIC ACID, 4-OH, 3,5-DI-IODO, HEXYL ESTER BENZOIC ACID, 3,5-DI-IODO-4-OH, 6-OH-HEXYL ESTER
4585		433		1.18		C13H16N2O3	BARBITURIC ACID-1-ALLYL-5-5-DIALLYL
4586 4587	OCTANOL HEXANE	10 376		3.41 1.38	3.41 =	C13H16O3 C13H17N1O2	PHENOXYACETIC ACID,4-CYCLOPENTYL N-METHYLCARBAMIC ACID,0-CYCLOPENTYLPHENYL ESTER
4588	CYCLOHEXANE	141		2.89		C13H17N102	STYRENE, 4-I-PROPYL, B-NITRO, B-ETHYL
4589 4590	OCTANOL HEXANE	458 376		1.59 2.53	1.59 =	C13H17N1O3 C13H17N1O3	5-(A,A-DIETHYLACETAMIDO)-1,3-BENZODIOXOLE N-METHYL-N-ACETYLCARBANIC ACID,M-I-PROPYLPHENYL ESTER
4591	HEXANE	376		1.84		C13H17N104	N-ME-N-ACETYLCARBAMIC ACID.O-I-PROPOXYPHENYL ESTER
4592 4593	CYCLOHEXANE OCTANOL	141 218		2.45 0.80	0.80 =	C13H17N104 C13H17N301	STYRENE, 3, 4-DIETHOXY, B-METHYL-8-NITRO AMINOPYRINE
4594	DIETHYL ETHER	3		-0.20	0.67 B	C13H17N3O1	ANINOPYRINE
4595 4596	CHCL3	338 405	44	1.86	1.36 B	C13H17N3O1 C13H17N3O1	AM INOPYRINE AM INOPYRINE
4597	OILS	2		-0.59	0.71 A	C13H17N3O1	AMINOPYRINE
4598 4599	BENZENE BENZENE	338 405	44	-0.40 0.83	1.12 8	C13H17N3O1 C13H17N3O1	AM INOPYR INE AM INOPYR INE
4600		254		-0.68		C13H17N3O1	AMINOPYRINE
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NO.	SOLVENT	REF	FOOT NOTE		LOGP OCT	EMPIRICAL FORMULA	NAME
4601	N-HEPTANE	338	44	-0.82		C13H17N3O1	ANINOPYRINE
4602	N-HEPTANE	340 82		-0.68	0.67	C13H17N3O1 C13H17N3O1	AMINOPYRINE AMINOPYRINE
4603 4604	OLEYL ALCOHOL N-HEPTANE	416		0.11	4.01	C13H18CL1N103	P-ANINOSALICYLIC ACID, 6-CHLOROHEXYL ESTER
4605	N-HEPTANE	138 448		3,45		C13H18F3N1 C13H18N2O1	N-PROPYLNORFENFLURAMINE N.N-DIMETHYLTRYPTAMINE.4-METHOXY
4606 4607	CHCL3	448		0.36 0.52		C13H18N2O1	N, N-DIMETHYLTRYPTAMINE, 5-METHOXY
46C8	CHCL3	448		0.57		C13H18N2O1 C13H18N2O1	N, N-DIMETHYLTRYPTAMINE, 6-METHOXY N, N-DIMETHYLTRYPTAMINE, 7-METHOXY
4609 4610	CHCL3 50%ETHER+50%DMF	448 125		0.98 0.26	1.45	C13H18N2O3	BARBITURIC ACID, 5-(1-CYCLOHEPTEN-1-YL)-5-ETHYL
4611	CHCL 3	399 399		2.48	1.92 B 2.18	C13H18N2O3 C13H18N2O3	CYCLOBARBITAL, N-METHYL CYCLOBARBITAL, N-METHYL
4612 4613	I-PENT. ACETATE	399		1.49		C13H18N2O3	CYCLOBARBITAL, N-METHYL
4614	OCTANOL	56		4.35	4.35 *	C13H18O3 C13H18O6	P-HYDROXYBENZOIC ACID, HEXYL ESTER GLUCOPYRANOSIDE, BENZYL (BETA)
4615 4616	OCTANOL OCTANOL	438 438		-0.70 -0.20	-0.70 = -0.20 =	C13H1806	GLUCOPYRANOSIDE, 3-METHYLPHENYL (BETA)
4617	DCTANOL	438		-0.16	-0.16 = -0.16 =	C13H18O6 C13H18O6	GLUCOPYRANOSIDE, 2-METHYLPHENYL (BETA) GLUCOPYRANOSIDE, 4-METHYLPHENYL (BETA)
4618 4619	OCTANOL OCTANOL	438 438		-0.16 -1.22	-1.22 =	C13H1807	GLUCOPYRANOSIDE, 2-HYDROXYMETHYLPHENYL(BETA)
4620	OCTANOL	438		-1.04	-1.04 =	C13H18O7	GLUCOPYRANOSIDE, 2-METHOXYPHENYL (BETA) GLUCOPYRANOSIDE, 4-METHOXYPHENYL (BETA)
4621 4622	OCTANOL OCTANOL	438 438		-0.73 -0.52	-0.73 = -0.52 =	C13H18O7 C13H18O7	GLUCOPYRANOSIDE, 3-METHOXYPHENYL (BETA)
4623	I-BUTANOL	4		-0.40	-1.07	C13H18O7	GLUCOPYRANOSIDE, SALICYL ALCOHOL P-AMINOBENZOIC ACID, HEXYL ESTER
4624 4625	OLEYL ALCOHOL OCTANOL	390 384		3.71 3.38	4,25 3.38 =	C13H19N1O2 C13H19N1O2	N-METHYL-3-METHYL-4-T-BUTYLPHENYLCARBAMATE
4626	DCTANOL	384		3.35	3.35 =	C13H19N102	N-METHYL-3-METHYL-5-T-BUTYLPHENYLCARBAMATE N-METHYL-3-METHYL-6-T-BUTYLPHENYLCARBAMATE
4627 4628	OCTANOL N-HEPTANE	384 370		3.14	3.14 =	C13H19N102 C13H19N103	P-AMINOSALICYLIC ACID, N-HEXYL ESTER
4629	OLEYL ALCOHOL	142		0.89	1.45	C13H19N1O3	2-HETHOXY-PHENOXYACETAHIDE .N .N-DIETHYL
4630 4631	N-HEPTANE OCTANOL	370 276		0.50 4.14	4.14 =	C13H19N1O4 C13H2OCL1N2	P-AMINDSALICYLIC ACID.6-HYDROXYHEXYL ESTER N-DIETHYLAMINDETHYLANILINE.3-CL-4-METHYL /PKA= 9.6/
4632	OLEYL ALCOHOL	459	31	2.57	3.14	C13H2ON2O1S1	THIOCAINE
4633 4634	OLEYL ALCOHOL OCTANOL	460 449		1.90 2.62	2.45 2.62 =	C13H2ON2OZ C13H2ON2OZ	P-AMINOBENZOIC ACID.DIETHYLAMINO-ETHYL ESTER BENZOIC ACID.P-ET.AMINO.N.N-DIMETHYLAMINOETHYL ESTER
4635	OILS	449		1.46	2.52 A	C13H2ON2U2	BENZOIC ACID, P-ET-AMIND, N. N-DIMETHYLAMINOETHYL ESTER
4636	XYLENE	449		2.20 1.65		C13H2ON2O2 C13H2ON2O2	BENZOIC ACID, P-ET-AMINO, N,N-DIMETHYLAMINOETHYL ESTER BENZOIC ACID, P-ET-AMINO, N,N-DIMETHYLAMINOETHYL ESTER
4637 4638	DI-BUTYL ETHER DIETHYL ETHER	378		0.50	1.38 8	C13H2ON2O2	N-PHENYLCARBAMIC ACID. DIETAMINOETHYL ESTER
4639	DCTANOL	218		1.87	1.87 =	C13H2ON2O2 C13H2ON2O2	PROCAINE PROCAINE
4640 4641	OCTANOL DIETHYL ETHER	218 461		1.92	1.71 A	C13H2ON2O2	PROCAINE /NOVOCAINE/
4642	CHCL3	405	_	2.66	2.08 B	C13H2ON2O2 C13H2ON2O2	PROCAINE /NOVOCAINE/ PROCAINE
4643 4644	OILS I-BUTANOL	462		1.82 1.80	2.03	C13H2ON2O2	PROCAINE
4645	OLEYL ALCOHOL	459		1.79	2.35	C13H2ON2O2	PROCAINE /NOVOCAINE/ PROCAINE (PH#3.8;PKA(1)=8.96;PKA(2)=2.01)
4646 4647	OCTANOL OCTANOL	235 235		-2.24 0.16	-2.24 = 0.16 =	C13H2ON2O2 C13H2ON2O2	PROCAINE (PH=7.30; PKA=8.96)
4648	DIETHYL ETFER	3	ı	0.97	1.70 B	C13H2OOB ·	PENTAERITHRITOL TETRA-ACETATE
4649 4650	I-BUTANOL OCTANOL	4 373		0.97 -0.67	0.87 -0.67 =	C13H2OO8 C13H21CL1N2O1	PENTAERITHRITOL TETRAACETATE NI-HEPTYLNICOTINAMIDE CHLORIDE
4651	DIETHYL ETFER	374		2.43	3.02 B	C13H21N1 C13H21N1	N-BUTYL-G-PHENYLPROPYL AMINE N-BUTYLAMPHETAMINE
4652 4653	N-HEPTANE CHCL3	138 396		3.10 4.05	3.24 B	C13H21N1	METHYL-1-PROPYLAMPHETAMINE
4654	N-HEPTANE	396		2.30	. 04	C13H21N1 C13H21N3O1	METHYL-I-PROPYLAMPHETAMINE B-DIETAMINOPROPIONAMIDE,N-(P-AMINOPHENYL)
4655 4656	OLEYL ALCOHOL	459 459		1.27	1.84 1.77	C13H21N3O1	PROCAINEAMIDE
4657	OCTANOL	65		-1.85	-1.85 =	C13H22BR1N1	BENZYLDIMETHYLBUTYLAMMONIUM BROMIDE OCTYLPYRIDINIUM BROMIDE
4658 4659	OCTANOL OLEYL ALCOHOL	65 459		-0.95 1.65	-0.95 = 2.22	C13H22BR1N1 C13H22N2O1	P-AMINOBENIYL, DIETHYLAMINOETHYL ETHER
4660	DLEYL ALCOHOL	459		2.32	2.89	C13H22N2O1	P-AMINOPHENYL, DIETHYLAMINOPROPYL ETHER
4661 4662	OLEYL ALCOHOL	459 459		1.13 2.90	1.68 3.47	C13H22N2O2S1 C13H22N2S1	P-AMINOPHENYL, DIETHYLAMINOPROPYL SULFONE ANILINE, 4-DIETHYLAMINOPROPYLMERCAPTO
4663	DCTANOL	348	3	0.85	0.85 =	C13H23NLO2 C13H26I1NlO2	N-OCTANOYLGYCLOBUTANECARBOXAMIDE 1,2,2,6,6,6-PENTAMETHYL-4-ACETYL PIPERIDINE MEI
4664 4665	CHCL3 CHCL3	424 424		-2.85 -2.00		C13H26 [ 1N1 O2	1,3,3,5,5-PENTAMETHYL-4-ACETYL PIPERIDINE MEI
4666	DIETHYL ETHER	376	44	0.70	0.32 8	C13H26N2O2	N-CYCLOHEXYLCARBAMIC ACID+DIETAMINGETHYL ESTER DODECYLGUANIDIUM ACETATE
4667 4668	OCTANOL OCTANOL	268 268		1.15	1.15 =	C13H29N3.C2H4'02 C13H3OBR1N3	DODECYLGUANIDINE HYDROBROMIDE
4669	OCTANOL	297	46	-0.16	-0.16 =	C13H30[1N1	TRIMETHYL-DECYL-AMMONIUM IODIDE
	CYCLOHEXANE CYCLOHEXANE	304 141		3.01 1.39		C14H8O2 C14H8O2	ANTHROQUINONE Phenanthrenequinone
4672	DIETHYL ETHER	143	62	4.35	3.93 A	C14H803S1	2-HYDROXYNAPHTHOQUINONE, 3-(W-A-THIENYLPROPYL)
4673 4674		317 427		4.96 4.45	4.45 =	C14H9CL5 C14H1O	ODT ANTHRACENE
4675	CCTANOL	427	,	4.46	4.46 #	C14H10	PHENANTHRENE
4676 4677		-224 463		4.60 2.69		C14H10 C14H10O2	PHENANTHRENE 9-CARBOXYFL UOR EN E
4678	OCTANOL	463	1	2.46		C14H1002S1	9-CARBOXYXTHIOXANTHENE
4679 4680		463 463		0.89 2.12	0.89 = 2.12 =	C14H1003 C14H1003	9~CARBOXY~9~HYDROXYFL UORENE 9~CARBOXYXANTHENE
4681	PARAFFINS	316	,	1.86		C14H11N1	9-AMINOPHENANTHRENE
4682 4683		141		4.40 4.96		C14H11N102 C14H12N1.C10H2104S1	FLUORENE,9-NITROMETHYLENE N-METHYLACRIDINIUM DECYLSULFATE
4684	CHCL 3	464	46	5.B6		C14H12N1,C12H23O4S1	N-METHYLACRIDINIUM DODECYLSULFATE
46 8 5 46 8 6		439		1.36 2.99		C14H12N2 C14H12N2O3	9-AMINO-3-METHYLPHENANTHRIDINE PHENOXYACETIC ACID,4-PHENYLAZO
4687	CYCLOHEXANE	141	L	-2.31		C14H12N2O4	1,4-NAPHTHOQUINONE,2,3-DIACETAMIDO
4688 4689		235 463		3.97 2.06	3.97 = 2.06 =		BENZYLBENZOATE A.A-DIPHENYLACETIC ACID
4690	DIETHYL ETHER	46	•	2.50	2.32 A	C14H12O3	BENZILIC ACID
4691		29 46		1.08	2.20 A 1.99 A	C14H12O3	BENZILIC ACID BENZILIC ACID
4693	XYLENE	46	5	-0.04	1.74 A	C14H12O3	BENZILIC ACID
4694 4695	TOLUENE OCTANOL	29		0.34 3.18		C14H12O3 C14H12O3	BENZILIC ACID PHENDXYACETIC ACID:M-PHENYL
4696	OCTANOL	276	5	4.28	4.28 =	C14H12O3S1	2-OH-3-CARBOXYBENZTHIOPHENYL ETHER /PKA = 3.00/
4697 4698		465 276		2.70 2.90		C14H12O5 C14H13N1	2-HYDROXYNAPHTHDQUINONE,3-(2-CARBOMETHOXYETHYL) DIHYDROMORPHANTHRIDINE /PKA = 3.00/
4699	N-FEPTANE	443	3	2.83		C14H13N102S1	PHENOTHIAZINE, 3, 7-DIMETHOXY
4700	N-HEPTANE	370	14	1.52		C14H13N103	P-AMINOSALICYLIC ACID, BENZYL ESTER

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NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLY	LOGP OCT	EMPIRICAL FORMULA	NAME
4701	HEXANE	391		2.19		C14H13N103	N-METHYL CARBAMATE, N-ACETYL, 1-NAPHTHYL
4702	N-HEPTANE	443		4.08		C14H13N1S1	PHENOTHIAZINE, 3, 7-DIMETHYL
4703	OCTANOL	218		4.79	4.79 =	C14H14	BIBENZYL
4704 4705	OCTANOL	276 65	46	4.82 -1.56	4.82 = -1.56 =	C14H14 C14H14BR1N1	1,2-01PHENYLETHANE CINNAMYLPYRIDINIUM BROMIDE
4706	OCTANOL CYCLOHEXANE	141	40	2.67	-1130 -	C14H14BR1N102	1,4-NAPHTHOQUINONE, 2-BROMO, 3-BUTYLAMINO
4707	OCTANOL	141		4.26	4.26 =	C14H14CL1N102	1,4-NAPHTHOQUINONE,2-CHLORO-3-BUTYLAHINO
4708	CYCLOHEXANE	141		2.64		C14H14CL1N102	1,4-NAPHTHOQUINONE,2-CHLORO,3-BUTYLAMINO
4709	OCTANOL	235	77 30	-1.78	-1.78 = 1.94 N	C14H14CL1N3.HCL C14H14N2O3S1	ACRIFLAVINE HYDROCHLORIDE N1-(3-ACETYLPHENYL)SULFANILAMIDE
4710 4711	CHCL 3 OCTANOL	444 141	26	1.43 3.29	3.29 =	C14H14O2S1	1,4-NAPHTHOQUINGNE, 2-BUTYLTHIO
4712	CYCLOHEXANE	141		3.43		C14H14O2S1	1,4-NAPHTHOQUINONE,2-BUTYLTHIO
4713	DIETHYL ETHER	143	62	3.68	3.35 A	C14H14O3	Z-HYDROXYNAPHTHOQUINONE, 3-BUTYL
4714 4715	DIETHYL ETHER DIETHYL ETHER	143 143	62 62	3.60 0.68	3.27 A 0.72 A	C14H14O3 C14H14O4	2-HYDROXYNAPHTHOQUINONE, 3-I-BUTYL 2-HYDROXYNAPHTHOQUINONE, 3-(W-DIMETHYL-W-OH-ETHYL)
4716	CYCLOHEXANE	304	02	1.79	V*12 A	C14H14O5	ETHYLACETOACETATE, 3,4-METHYLENEDIOXYBENZAL
4717	CYCLOHEXANE	304		3.52		C14H15CL104	DIETHYLMALONATE, 4-CHLOROBENZAL
4718	CYCLOHEXANE	304		3.28		C14H15F104 C14H15F104	DIETHYLMALONATE, 2-FLUOROBENZAL DIETHYLMALONATE, 4-FLUOROBENZAL
4719 4720	CYCLOHEXANE CYCLOHEXANE	304 304		3.32 3.82		C14H15F104	DIETHYLMAL ONATE, 3-FLUORDBENZAL
4721	DIETHYL ETHER	466		2.77	2.43 A	C14H15N1	DIBENZYLAMINE
4722	CYCLOHEXANE	141		0.66		C14H15N1	DI BENZYL AMINE
4723	CHCL3	466 466		0.40 4.69	3.20 B	C14H15N1 C14H15N1	DI BENZYLAMINE DI BENZYLAMINE
4724 4725	HEXANE Paraffins	316		1.96		CI4HI5NI	4-DIMETHYL AM INOB IPHENYL
4726	PARAFFINS	316		3.19		C14H15N1	N-(4-DIPHENYL)-ETHYLAHINE
4727	PARAFFINS	316		0.42		C14H15N101	N-(4-DIPHENYL)-AMINOETHANDL
4728 4729	DIETHYL ETFER CHCL3	466 466		3.19 3.29	2.84 A 2.59 B	C14H15N1O1 C14H15N1O1	2-HYDROXYIMINDDIBENZYL 2-HYDROXYIMINDDIBENZYL
4730	HEXANE	466		1.51	2.37 0	C14H15N101	2-HYDROXYIMINODIBENZYL
4731	OCTANOL	141		3.11	3.11 =	C14H15N1O2	1,4-NAPHTHOQUINONE, 2-BUTYLAMINO
4732	CYCLOHEXANE	141		2.39		C14H15N102	1,4-NAPHTHOQUINDNE,2-BUTYLAMINO
4733 4734	CYCLOHEXANE CYCLOHEXANE	141 304		2.23 2.50		C14H15N102S1 C14H15N104	1,4-NAPHTHOQUINONE,2-AMINO,3-BUTYLTHIO ETHYLCYANOACETATE,2,4-DIETHOXYBENZAL
4735	CYCLOHEXANE	304		2.20		C14H15N104	ETHYLCYANDACETATE, 3, 4-DIMETHOXYBENZAL
4736	CYCLOHEXANE	304		2.65		C14H15N1O4	ETHYLCYANOACETATE, 3, 5-DIMETHOXYBENZAL
4737	CYCLOHEXANE	304		2.26		C14H15N1O6 C14H15N1O6	DIETHYLMALONATE,2-NITROBENZAL DIETHYLMALONATE,4-NITROBENZAL
4738 4739	CYCLOHEXANE CYCLOHEXANE	304 304		2.71 2.81		C14H15N106	DIETHYLMALONATE, 3-NITROBENZAL
4740	OCTANOL	302		4.58	4.58 =	C14H15N3	AZOBENZENE, 4-DIHETHYLAMINO
4741	CHCL 3	467	_	1.09	2.40 A	C14H15O4P1	DIBENZYLPHOSPHORIC ACID
4742	BENZENE TOLUENE	467 467	7	0.10	1.50 A 1.29 A	C14H15O4P1 C14H15O4P1	DIBENZYLPHOSPHORIC ACID DIBENZYLPHOSPHORIC ACID
4743 4744	NITROBENZENE	467		1.07	1.75	C14H15Q4P1	DIBENZYLPHOSPHORIC ACID
4745	N-BUTYL ACETATE	467		1.97	1.85	C14H15O4P1	DI BENZYL PHOSPHOR IC ACID
4746	CCL4	467	-	-1.13	1 40	C14H15O4P1 C14H15O4P1	DIBENZYLPHOSPHORIC ACID DIBENZYLPHOSPHORIC ACID
4747 4748	ME-I-BUT-KETONE OCTANOL	467 65	7 46	1.81	1.69	C14H16BR1N1	G-PHENYLPROPYLPYRIDINIUM BROMIDE
4749	DIETHYL ETHER	457		0.95	0.95 A	C14H16N2O2 158	1,4-NAPHTHOQUINONE, 2-BUTYLHYDRAZINO
4750	DIETHYL ETFER	457	62	0.87	0.88 A	C14H16N2O2	1,4-NAPHTHOQUINONE,2-I-BUTYLHYDRAZINO
4751 4752	OCTANOL CHCL3	393 393	63 63	2.52 2.08	2.52 = 2.54 N	C14H16N2O2S1 C14H16N2O2S1	N-SULFANILYL-3,4-XYLAMIDE N-SULFANILYL-3,4-XYLAMIDE
4753	MIXED SOLV#1	433	• • • • • • • • • • • • • • • • • • • •	0.32		C14H16N2O5	BARBITURIC ACID, 1-CARBETHOXYMETHYL-5-5-DIALLYL
4754	OCTANOL	134		2.07	2.07 =	C14H16N4D251	3-BENZOYLMETHIO-4-AMINO-6-I-PR-1,2,4-TRIAZINE-5-ONE ETHYLACETDACETATE,4-METHYLBENZAL
4755 4756	CYCLOHEXANE CYCLOHEXANE	304 304		2.35 2.50		C14H16O3 C14H16O3	ETHYLACETOACETATE, 3-METHYLBENZAL
4757	CYCLOHEXANE	304		2.58		C14H16O3	ETHYLACETOACETATE, 2-METHYLBENZAL
4758	CYCLOHEXANE	304		1.00		C14H16O4	ACETYL ACETONE, 2, 4-DIMETHOXYBENZYL
4759	CYCLOHEXANE	141 304		3.26 1.91		C14H16O4 C14H16O4	BENZALMALONATE, DIETHYL ESTER ET HYLACETOACETATE, 4-METHOXYBENZAL
4760 4761	CYCLOHEXANE CYCLOHEXANE	304		1.93		C14H16O4	ETHYLACETOACETATE,3-METHOXYBENZAL
4762	OCTANOL	65		2.97	2.97 =	C14H17F3N2O1	1-CYCLOBUTYL-1-ET-3-(M-TRIFLUOROMETHYLPHENYL)-UREA
4763	CYCLOHEXANE	446		0.82		C14H17N1O1	N-CYCLOPENTYLCINNAMAMIDE N.N-PENTAMETHYLENECINNAMAMIDE
4764 4765	CYCLOHEXANE OCTANOL	446 227		-0.20	-0.20 =	C14H17N1O1 C14H17N3O9	6-AZAURIDINE TRIACETATE (PKA=6.35)(NCS 67239)
4766	CHCL3	448	65	0.36	****	C14H18N2O2	N. N-DIMETHYLTRYPTAMINE. 5-ACETYL
4767	OILS	442		1.81	2.84 A	C14H18N2O3	METHOREXITAL ACID. 4-CYCI OHEXYI
4768	OCTANOL OLEYL ALCOHOL	10 142		3.79 1.53	3.79 = 2.08	C14H18O3 C14H19N1O3	PHENDXYACETIC ACID, 4-CYCLOHEXYL 2-METHDXY-4-ALLYLPHENDXYACETAMIDE, N, N-DIMETHYL
4769 4770	OILS	447		0.01	1.25 A		A-BROMO-I-VALERYL-PSEUDOCUMIDINE
4771	N-HEPTANE	416	14	1.30		C14H2OCL1N103	P-AMINOSALICYLIC ACID, 7-CHLOROHEPTYL ESTER
4772	N-HEPTANE	138 448		3.95 0.27		C14H2OF3N1 C14H2ON2	N-BUTYLNORFENFLURAMINE N,N-DIETHYLTRYPTAMINE
4773 4774	CHCL3 CHCL3	448		0.76		C14H2ON2D1	N-METHYL-N-ETHYLTRYPTAMINE, 5-METHOXY
4775	OCTANOL	56	_	4.83	4.83 =	C14H2OO3	P-HYDROXYBENZOIC ACID, HEPTYL ESTER
4776	OCTANOL	438		0.26	0.26 =	C14H20D6	GLUCOPYRANOSIDE, 3, 5-DIMETHYLPHENYL (BETA) GLUCOPYRANOSIDE, 3-ETHYLPHENYL (BETA)
4777 4778	OCTANOL DLEYL ALCOHOL	438 390		0.31 4.26	0.31 = 4.80	C14H2OO6 C14H21N1O2	P-AMINOBENZOIC ACID, HEPTYL ESTER
4779	HEXANE	391		2.48		C14H21N1O2	N-METHYL CARBAMATE, 3, 5-DI-I-PROPYLPHENYL
4780	N-HEPTANE	370		1.42		C14H21N1O3	P-AMINOSALICYLIC ACID.N-HEPTYL ESTER
4781	N-HEPTANE	370		0.86	1.76 =	C14H21N1O4 C14H21N3O2	P-AMINOSALICYLIC ACID, 7-HYDROXYHEPTYL ESTER I-(2-DIMEAMINOET)-3(M-MEOPHENYL)-2-IMIDAZOLIDINONE
4782 4783	OCTANOL GLEYL ALCOHOL	468 459		1.76 2.44	3.01	C14H22N201	P-AMINOPHENYL, DIETHYLAMINOPROPYL KETONE
4784	OLEYL ALCOHOL	460		2.24	2.78	C14H22N2D2	P-AMINOBENZOIC ACID, A-ME-B-(DIETAM)-ETHYL ESTER
4785	OLEYL ALCOHOL	460		2.32	2.86 3.15 =	C14H22N2O2 C14H22N2O2	P-AMINDBENZOIC ACID,B-ME-B-(DIETAM)ETHYL ESTER BENZOIC ACID,P-PR-AMINO,N,N-DIMETHYLAMINDETHYL ESTER
4786 4787	OCTANOL DILS	449 449		3.15 1.95	2.96 A		BENZOIC ACID.P-PR-AMINO.N.N-DIMETHYLAMINOETHYL ESTER
4788	XYLENE	449		2.81		C14H22N2O2	BENZOIC ACID.P-PR-AMIND.N.N-DIMETHYLAMINDETHYL ESTER
4789	DI-BUTYL ETHER	449		2.25	1 40 0	C14H22N2O2	BENZOIC ACID, P-PR-AMINO, N, N-DIMETHYLAMINOETHYL ESTER N-M-TOLYLCARBAMIC ACID, DIETHYLAMINOETHYL ESTER
4790 4791	DIETHYL ETHER DIETHYL ETHER	378 378		0.78 0.46	1.62 8 1.34 B	C14H22N2O2 C14H22N2O2	N-C-TOLYLCARBAMIC ACID.DIETHYLAMINOETHYL ESTER
4792	DIETHYL ETFER	378	44	0.75	1.60 B	C14H22N202	N-P-TOLVICARRANIC ACID.DIETHYLAMINOETHYL ESTER
4793	DIETHYL ETFER	378		0.36	1.26 B	C14H2ZNZO3	N-M-NETHOXYPHENYLCARBAMIC ACID.DIETAMINDET.ESTER N-O-METHOXYPHENYLCARBAMIC ACID.DIETAMINDET.ESTER
4794 4795	DIETHYL ETHER DIETHYL ETHER	378 378		0.55 0.35	1.42 B	C14H22N2O3 C14H22N2O3	N-P-NETHOXYPHENYLCARBAMIC ACID.DIETAMINOET.ESTER
4796	DI~I-PR. KETONE	93	46	-0.58		C14H22N4O7	TETRAETHYLAMMONIUM PICRATE
4797	OCTANOL	373		-0.14	-0.14 =	C14H23CL1N2O1	N1-OCTYLNICOTINAMIDE CHLORIDE ANILINE, P-(4-DIETHYLAMINOBUTYL)
4798 4799	OLEYL ALCOHOL OCTANOL	459 341		3.26 1.47	3.83 1.47 =	C14H24N2 C14H24N2	N.N-DIBUTYL-3-PYRIDYLMETHYLAMINE
4800	N-HEPTANE	139		4.28	••	C14H28D2	TETRADECANDIC ACID/MYRISTIC ACID/

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NO.	SOLVENT	REF	FOOT	LOGP	LOGP	EMPIRICAL	NAME
	*		NOTE	SOLV	OCT	FORMULA	
4801	OCTANOL	297	46	-1.30	-1.30 =	C14H32I1N1	TRIBUTYLETHYLANHONIUM IODIDE
4802	OCTANOL	409 469		2.90 2.36	2.90 = 2.36 =	C15H10O2 C15H11CL1N2O1	Z-PHENYL-1, 3-INDANEDIONE QUINAZOL IN-2-ONE, 1-NE-4-PHENYL-7-CHLORO
4803 4804	OCTANOL OCTANOL	469		2.38	2.38 =	C15H11CL1N2O1	QU INAZOL IN-2-ONE, 1-NE-4-PHENYL-6-CHLORO
48C5	OCTANOL	469		1.87 1.79	1.87 = 1.79 =	C15H11F1N2O1 C15H12N2O1	QUINAZOLIN-Z-ONE, 1-ME-4-PHENYL-6-FLUORO QUINAZOLIN-2-ONE
4806 4807	OCTANOL OILS	469 470		1.96	2.97 A	C15H12N2O1S1	5,5-DIPHENYL-2-THIOHYDANTOIN
4808	OILS	470		0.96 2.47	2.06 A 2.47 =	C15H12N2O2 C15H12N2O2	5,5-DIPHENYLHYDANTOIN HYDANTOIN, 5,5-DIPHENYL
4809 4810	OCTANOL OCTANOL	218 469		1.72	1.72 =	C15H12N2O2	QU INAZOL IN-2-ONE, 6-HYDROXY
4811	CYCLOHEXANE	141		3.94 2.67	2.67 =	C15H12O1 C15H12O2	BENZALACETOPHENONE 9-CARBOXY-9,10-DIHYDROANTHRACENE
4812 4813	OCTANOL OCTANOL	463 276		4.69	4.69 =	C15H13CL103S1	2-OH-3-CARBOXY-5-ME-BENZTHIO-2'-CL-PHENYL ETHER
4814	CYCLOHEXANE CHCL3	304		1.13 3.18	3.61 N	C15H13N1O1 C15H13N1O2	CINNAMANILIDE PHENYLHYDROXYLAMINE,N-CINNAMOYL
4815 4816	OCTANOL	471 10		1.99	1.99 =	C15H13N1O4	PHENOXYACETIC ACID, 3-BENZAHIDO
4817 4818	CHCL3 CCL4	306 306		1.70 -0.12	2.69 A 1.83 A	C15H14   1N1O4S1 C15H14   1N1O4S1	N- (P-I ODOBENZENESUL FON YL ) PHENYLALANI NE N- (P-I ODOBENZENESUL FON YL ) PHENYLALANI NE
4819	PARAFFINS	439		2.35		C15H14N2	9-AMINO-1,3-DIMETHYLPHENANTHRIDINE
4820 4821	OCTANOL CHCL3	393 343		1.57	1.57 = 1.93 N	C15H14N4O2S1 C15H14N4O2S1	SULFAPHENAZOLE SULFAPHENAZOLE
4822	CHCL3	393	63	1.45	1.96 N	C15H14N4O2S1	SULFAPHENAZOLE
4823 4824	BENZENE I-PENT. ACETATE	343 343		0.64 1.94	1.95 A 1.83	C15H14N4O2S1 C15H14N4O2S1	SULFAPHENAZOLE SULFAPHENAZOLE
4825	CGL4	343		-0.83	1.15 A	C15H14N4O2\$1	SULFAPHENAZOLE
4826 4827	OCTANOL DIETHYL ETHER	463 143		2.58 3.81	2.58 = 3.46 A	C15H14O2 C15H14O3	A, A-DIPHENYLPROPIONIC ACID 2-HYDROXYNAPHTHOQUINONE, 3-W-DIMETHYLALLYL
4828	DIETHYL ETHER	143		1.50	1.44 A	C15H14O4	2-HYDROXYNAPHTHOQUINONE, 3-(W-DIMETHYLACETONYL)
4829	DIETHYL ETHER	143 465		1.33	1.29 A 2.84 A	C15H14O4 C15H14O5	2-HYDROXYNAPHTHOQUINONE,3-(W-ME-W-HYDROXYME-ALLYL) 2-HYDROXYNAPHTHOQUINONE,3-(3-CARBOMETHOXYPROPYL)
4830 4831	DIETHYL ETFER	465	62	2.00	1.87 A	C15H14O5	2-HYDRDXYNAPHTHOQUINONE, 3-(4-CARBOXYBUTYL)
4832 4833	OCTANOL N-HEPTANE	276 370		2.82 2.01	2.82 =	C15H15N1 C15H15N1O3	DIBENZAZOCINE P-AMINOSALICYLIC ACID, B-PHENYLETHYL ESTER
4834	OILS	447		0.03	1.28 A	C15H168R1N101	A-BROMO-I-VALERYL-A-NAPHTHYLAMINE
4835 4836	DIETHYL ETFER CYCLOHEXANE	457 141		1.19 2.93	1.17 A	C15H16N2O2 C15H16N2O2	1,4-NAPHTHOQUINONE,2-CYCLOPENTYLHYDRAZINO 1-PHENYL-1-P-TOLUIDINO-2-NITROETHANE
4837	DIETHYL ETHER	3		0.70	1.46 B	C15H16N4	NEUTRAL RED BASE
4838 4839	I-BUTANOL CHCL3	4 455		2.04 7.30	2.36	C15H16N4 C15H16N4S1	NEUTRAL RED BASE THIOCARBAZONE, 2, 2-DIMETHYDIPHENYL
4840	CYCLOHEXANE	141		4.70		C15H16O2S1	1,4-NAPHTHOQUINONE,2-METHYL,3-BUTYLTHIO
4841 4842	DIETHYL ETHER Diethyl ether	143 143		4.27 1.58	3.87 A 1.51 A	C15H16O3 C15H16O4	2-HYDROXYNAPHTHOQUINONE, 3-I-PENTYL 2-HYDROXYNAPHTHOQUINONE, 3-(3-HYDROXYMETHYLBUTYL)
4843	DIETHYL ETHER	143	62	1.65	1.57 A	C15H16O4	2-HYDROXYNAPHTHOQUINONE, 3-(2-HYDROXY-3-METHYLBUTYL) 2-HYDROXYNAPHTHOQUINONE, 3-(W-DIMETHYL-W-CH-PROPYL)
4844 4845	DIETHYL ETFER PARAFFINS	143 316		1.24	1.21 A	C15H16O4 C15H17N1O2	3-(N-4-DIPHENYLAMINOI-PROPANE-1,2-DIOL
4846	CYCLOHEXANE	141		2.92	-1 07 -	C15H17N102	1,4-NAPHTHOQUINONE,2-METHYL,3-BUTYLAMINO P-BIPHENYLTRIMETHYLAMMONIUM BROMIDE
4847 4848	OCTANOL DIETHYL ETFER	283 457		~1.87 1.44	-1.87 = 1.39 A	C15H18BR1N1 C15H18N2O2	1,4-NAPHTHOQUINONE,2-PENTYLHYDRAZINO
4849	CYCLDHEXANE	304		2.69		C15H18D1	ACETYL ACETONE, 2, 4, 6-TRIMETHYLBENZAL DIETHYLMALONATE, 3-METHYLBENZAL
4850 4851	. CYCLOHEXANE CYCLOHEXANE	304 304		4.00 1.09		C15H18O4 C15H18O4	ETHYLACETOACETATE, 3,4-DIMETHOXYBENZAL
4852 4853	CYCLOHEXANE CYCLOHEXANE	304 304		1.80 2.75		C15H18O4 C15H18O4	ETHYLACETOACETATE, 2,4-DIMETHOXYBENZAL ETHYLACETOACETATE, 2,3-DIMETHOXYBENZAL
4854	CYCLOHEXANE	304		2.98		C15H18O5	DIETHYLMALONATE, 4-METHOXYBENZAL
4855 4856	CYCLOHEXANE CYCLOHEXANE	304 304		3.49 3.59		C15H18O5 C15H18O5	DIETHYLMALONATE, 2-METHOXYBENZAL DIETHYLMALONATE, 3-METHOXYBENZAL
4857	CYCLOHEXANE	304		1.36		C15H18O6	DIETHYLMALONATE, 3-METHOXY, 4-HYDROXYBENZAL
4858 4859	CYCLOHEXANE CYCLOHEXANE	446 446		1.39		C15H19N1O1 C15H19N1O1	N-CYCLOHEXYLCINNAMAMIDE N-N-HEXAMETHYLENECINNAMAMIDE
4860	CCL4	472		1.76		C15H21AL106 (ii	ALUMINUM-TRI-ACETYLACETONATE
4861 4862	CHCL3 BENZENE	472 472		3.64 2.04	2.18 B	C15H21C0106 :;	COBALT TRI-ACETYLACETONATE COBALT TRI-ACETYLACETONATE
4863	CCL4	472		1.54		C15H21C0106	COBALT-TRI-ACETYLACETONATE
4864 4865	CCL4 CHCL3	472 396		2.00 3.62	2.87 B	C15H21CR106 C15H21N1	CHROMIUM-TRI-ACETYLACE TONATE FENCAMFAMINE
4866	N-+EPTANE	396		2.04		C15H21N1	FENCAMFAMINE
4867 4868	OCTANOL OLEYL ALCOHOL	283 142		-1.54 1.99	~1.54 = 2.54	C15H21N101.HCL C15H21N102	2-METHYL-5-ET-2*-OH-6,7-BENZOMORPHAN/NIH#7910/ 4-ALLYLPHENOXYACETAMIDE,N,N-DIETHYL
4869 4870	OCTANOL CCL4	9 472		0.17 2.04	0.17 =	C15H21N3O2 C15H21RH1O6	PHYSOSTIGMINE RHENIUM-TR-ACETYLACETONATE
4871	N-HEPTANE	416	14	1.42		C15H22CL1N1O3	P-AMINOSALICYLIC ACID, 8-CHLOROOCTYL ESTER
4872 4873	CHCL3 OCTANDL	448 438		0.90 0.65	0.65 =	C15H22N2O1 C15H22O6	N,N-DIETHYLTRYPTAMINE, 5-METHOXY GLUCOPYRANOSIDE,3-ISOPROPYLPHENYL (BETA)
4874	OLEYL ALCOHOL	390	44	4.78	5.32	C15H23N1U2	P-AMINOBENZOIC ACID:OCTYL ESTER
4875 4876	N-HEPTANE OLEYL ALCOHOL	370 473		1.48 3.54	4.11	C15H23N1O3 C15H23N1O3	P-AMINOSALICYLIC ACID. N-DCTYL ESTER 4-ETHOXYBENZOIC ACID. DIETHYLAMINDETHYL ESTER
4877	N-HEPTANE	370	14	1.01		C15H23N1O4	P-AMINOSALICYLIC ACID, 8-HYDROXYOCTYL ESTER
4878 4879	OCTANOL OCTANOL	218 276		0.55 4.19	0.55 = 4.19 =	C15H23N1O4 C15H23N3O2	CYCLOHEXIMIDE 2-(DIETAMINOME)-6-ME-7-NITROTETRAHYDROQUINOLINE /9.6/
4880	OLEYL ALCOHOL	460		2.78	3.32	C15H24N2O2	P-AMINOBENZOIC ACID, A, A-DIME-B-(DIETAM)-ETHYL ESTER
4881 4882		460 460		2.66 2.57	3.20 3.11	C15H24N2O2 C15H24N2O2	P-AMINOBENZOIC ACID, A, B-DIME-B-(DIETAM)-ETHYL ESTER P-AMINOBENZOIC ACID, B, B-DIME-B-(DIETAM)ETHYL ESTER
48 83	DCTANDL	449		3.73	3.73 =	C15H24N2O2	BENZOIC ACID, P-BU-AMINO, N, N-DIMETHYLAMINGETHYL ESTER
4884 48 <i>8</i> 5		461 449		3.04 2.43	2.79 A 3.40 A	C15H24N2O2 C15H24N2O2	BENZOIC ACID, P-BU-AMINO, N, N-DIMETHYLAMINDETHYL ESTER BENZOIC ACID, P-BU-AMINO, N, N-DIMETHYLAMINDETHYL ESTER
4886	OILS	462		2.95	2.44 A	C15H24N2O2	BENZOIC ACID, P-BU-AMINO, N, N-DIMETHYLAMINOETHYL ESTER BENZOIC ACID, P-BU-AMINO, N, N-DIMETHYLAMINOETHYL ESTER
48 E 7 48 88	XYLENE DI-BUTYL ETHER	449 449		3.30 2.76		. C15H24N2O2 C15H24N2O2	BENZOIC ACID, P-BU-AMING, N. N-DINETHYLAMINOETHYL ESTER
4889 4890	DIETHYL ETHER	378	44	0.63	1.49 B 1.62 B	C15H24N2O2 C15H24N2O3	N-2,4-DIMEPHENYLCARBAMIC ACID, DIETAMINDET.ESTER N-M-ETHOXYPHENYLCARBAMIC ACID, DIETAMINDET.ESTER
4891	DIETHYL ETHER	378 378	44	0.78 0.85	1.68 B	C15H24N2O3	N-O-ETHOXYPHENYL CARBAMIC ACID: DIETAMINOET. ESTER
4892 4853	DIETHYL ETFER Cyclohexane	378 474		0.78 -0.07	1.62 8	C15H24N2O3 C15H24N4D2S2	N-P-ETHOXYPHENYLCARBAMIC ACIO.DIETAMINOET.ESTER THIAMINE PROPYL DISULFIDE
4894	CHCL 3	474	14	1.56	1.10 B	C15H24N4O252	THIAMINE PROPYL DISULFIDE
4895 4896	BENZENE Ethyl acetate	474 474	14 14	-1.85 0.88	0.89	C15H24N4O2S2 C15H24N4O2S2	THIAMINE PROPYL DISULFIDE
4897	OCTANOL	373		0.46	0.46 *	C15H25CL1N2Ol	NI-NONYLNICOTINAMIDE CHLORIDE
4898 4899		65 65		-1.53 -0.72	-1.53 = -0.72 =	C15H26BR1N1 C15H26BR1N1	BENZYLDIMETHYLHEXYLAMMONIUM BROMIDE DECYLPYRIDINIUM BROMIDE
4900	DIETHYL ETPER	3		2.55	3.05 B	C15H26N2	SPARTE INE

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NO.	SOL VENT	REF	FOOT	LOGP	LOGP	EMPIRICAL	NAME
4901	I-BUTANOL	4	NOTE	SOL V 2.85	OCT 3.50	FORMULA C15H26N2	SPARTEINE
4902	OCTANOL	56		2.54	2.54 *	C15H26O6	GLYCEROL, TRI-BUTYRATE
4903 4904	OCTANOL CYCLOHEXANE	268 304	07	1.77 3.92	1.77 =	C15H32CL1N1 C16H9CL102	N-DECYLPIPERIDINE HYDROCHLORIDE INDANE, 1, 3-DIONE, 2(2-CHLOROBENZAL)
4905	CYCLOHEXANE	304		3.82		C16H9F1D2	INDANE,1,3-DIDNE,2(2-FLUROBENZAL) 1,4-NAPHTHDQUINONE,2-BROMO,3-ANILINO
49C6 49C7	CYCLOHEXANE OCTANOL	141		2.00 4.22	4.22 =	C16H10BR1N102 C16H10CL1N102	1.4-NAPHTHOQUINONE, 3-ANILINO-2-CHLORD
4908	CYCLOHEXANE	141		1.56		C16H10CL1N102	1,4-NAPHTHOQUINONE,2-CHLORO,3-ANILINO 1,4-NAPHTHOQUINONE,2-ANILINO-3-SULFONATE,K-SALT
4909 4910	OCTANOL CYCLOHEXANE	141		-0.99 3.52	-0.99 =	C16H10K1N105S1	BENZAL HAL ONON ITRILE + A-PHENYL
4911	CYCLOHEXANE	304		3.40		C16H10U2	INDANE, 1, 3-DIONE, 2-BENZAL
4912 4913	OCTANOL CYCLOHEXANE	141	26	4.40 3.62	4.40 =	C16H10O2 C16H10O2	I, 4-NAPHTHOQUINONE, 2-PHENYL I, 4-NAPHTHOQUINONE, 2-PHENYL
4914	CYCLOHEXANE	141		0.49		C16H10D3	1,4-naphthoquindne,2-phenyl,3-hydroxy 1,4-naphthoquindne,2-phenylsulfonyl
4915 4916	OCTANOL CYCLOHEXANE	141	26	2.14 1.50	2.14 =	C16H1004S1 C16H1004S1	1.4-NAPHTHOQUINONE,2-PHENYLSULFONYL
4917	OCTANOL	469		2.69	2.69 =	C16H11F3N2O1	QUINAZOLIN-2-DNE,1-ME-4-PHENYL-6-TR1FLUDROMETHYL 1,4-NAPHTHOQUINONE, 2-ANILINO
4918 4919	OCTANOL CYCLOHEXANE	141		2.84 2.63	2.84 =	C16H11N102 C16H11N102	1,4-NAPHTHOQUINONE, 2-ANILINO
4920	CYCLOHEXANE	304		0.97		C16H11N1D3	COUMARIN, 3-CARBOXYANIL IDE PHENOTHIAZINE, 3,4-BENZO
4921 4922	N-HEPTANE N-HEPTANE	443 443		3.23 3.84		C16H11N151 C16H11N151	PHENOTH (AZINE, 1, 2-BENZO
4923	OCTANOL	227		4.06	4.06 =	C16H12N2	5-METHYL-6H-PYRIOD(4,3-B)CARBAZOLE (87206)(PKA= 7.02) CYANDACETANILIDE,BENZAL
4924 4925	CYCLOHEXANE CYCLOHEXANE	304 304		2.11 3.69		C16H12N2O1 C16H12O1	1-INDANEONE, 2-BENZYL ID INE
4926	OCTANOL	9		2.82	2.82 =	C16H13CL1N2O1	DIAZEPAM
4927 4928	OCTANDL OCTANDL	218 469		2.44 1.91	2.44 = 1.91 =	C16H14CL1N3O1 C16H14N2O2	LIBRIUM QUINAZOLIN-2-ONE, 6-METHOXY
4929	BCTANOL	469		0.59	0.59 =	C16H14N2O3S1	QUINAZOLIN-2-ONE, 1-ME-4-PHENYL-6-METHYL SULFONYL DIBENZOCYCLOOCTANE-5-ONE
4930 4931	DCTANOL REXANE	276 456		2.58 0.62	2.58 =	C16H14O1 C16H15CL1D5	7-CL-4,6-DIMED-6'-MEGRIS-2'-EN-3,4'-DIONE
4932	DCTANOL	276		2.33	2.33 =	C16H16	CYCLOPHANE 1,4-NAPHTHOQUINONE,2-CYCLOHEXYLHYDRAZINO
4933 4934	DIETHYL ETHER DIETHYL ETHER	457 457	62 62	1.65 1.64	1.57 A 1.56 A	C16H16N2O2 C16H16N2O2	1.4-NAPHTHOODINDNE,2-CYCLOPENTYLMETHYLHYDRAZINO
4935	OCTANOL	56		-0.28	-0.28 =	C16H16N2O5S1	CEPHALOSPORANIC ACID, 7-(D-MANDELAMIDO)-DESACETOXY BIS(P-AMINOSALICYLIC ACID) ETHYL ESTER
4936 4937	N-HEPTANE Diethyl ether	416 143	14 62	1.49 4.76	4.30 A	C16H16N2O6 C16H16O3	2-HYDROXYNAPHTHOQUINONE, 3-CYCLOHEXYL
4938	DIETHYL ETHER	465	62	2.40	2.23 A	C16H16O5	2-HYDROXYNAPHTHOQUINONE, 3-(2-ME-3-CARBOMETHYOXYPROP 2-HYDROXYNAPHTHOQUINONE, 3-(W-CARBOMETHOXYBUTYL)
4939 4940	DIETHYL ETFER DODECANE	143 475	62	2.53 4.45	2.34 A	C16H16O5 C16H17CL1N2S1	ETHYL "CHLORPROMAZINE"
4941	N-HEPTANE	370	14	2.19	2 07 -	C16H17N103	P-AMINOSALICYLIC ACID,G-PHENYLPROPYL ESTER 1,4-NAPHTHOQUINONE, 2-ACETAMIDO-3-BUTYLTHIO
4942 4943	OCTANOL CYCLOHEXANE	141		2.07 1.28	2.07 =	C16H17N1D3S1 C16H17N1D3S1	1.4-NAPHTHOQUINONE,2-ACETAMIDO,3-BUTYLTHIU
4944	CYCLOHEXANE	141		0.49	1 03 -	C16H18N2U3 C16H18N2U4S1	1,4-NAPHTHOQUINONE,2-ACETAMIDO.3-BUTYLAMING BENZYLPENICILLIN
4945 4946	DIETHYL ETHER	127 106		1.83	1.83 = 1.82 A	C16H18N2O4S1	BENZYLPENICILLIN
4947	I-BUTANOL	130	12	0.20 1.59	-0.22 1.66	C16H18N2O4S1 C16H18N2O4S1	BENZYL PENICILL IN BENZYL PENICILL IN
4948 4949	N-BUTYL ACETATE	476 476		1.60	1.60	C16H18N2O4S1	BENZYLPENICILLIN
4950	OLEYL ALCOHOL	142		1.38	1.93 1.40 =	C16H18N2O5 C16H18N2O5S1	MALONYL UREA, ETHYL-(2-MEO-4-ALLYLPHENOXY) PENICILLIN, A-HYDROXYBENZYL
4951 4952	OCTANOL OCTANOL	127 127		2.09	2.09 =	C16H18N2O5\$1	PHENOXYPENICILLIN/PENICILLIN V/
4953 4954	I-BUTANGL OCTANOL	130 283	65	0.12 0.87	-0.34 0.87 =	C16H18N2O531	PHENDXYPENICILLIN/PENICILLIN V/ NIALANIDE
4955	DIETHYL ETHER	143	62	4.90	4.41 A	C16H18O3	2-HYDROXYNAPHTHOOUINONE, 3-HEXYL
4956 4957	OCTANUL HEXANE	438 456		0.76 -0.41	0.76 =	C16H18O6 C16H19CL1O4	GLUCOPYRANDSIDE, 2-NAPHTHYL (BETA) 7-CL-6*-OH-4, 6-DIMETHOXY-2*-MEGRISAN-3-ONE
4958	HEXANE	456		-2.82		C16H19CL105	7-CL-4*,6*-DÍ-OH-4,6-DIMEO-2*-HETHYLGRISAN-3-ONE BENZYLAMPHETAMINE
4959 4960	CHCL3 N-HEPTANE	396 396	31 31	3.35 2.04	2.64 B	C16H19N1 C16H19N1	BENZYL AMPHETAM IN E
4961	PARAFFINS	316		-0.58		C16H19N102	N, N-DI-B-HYDROXYETHYL-4-AMINOBIPHENYL ETHYLCYANOACETATE, 3-BUTOXYBENZAL
4962 4963	CYCLOHEXANE I-BUTANOL	304 130		3.79 -0.23	-0.83	C16H19N1O3 C16H19N3O4S1	AMPICILLIN
4964	CYCLOHEXANE	304		3.35		C16H2OO5	DIETHYLMALONATE,3-ETHOXYBENZAL DIETHYLMALONATE,3,4-DINETHOXYBENZAL
4965 4966	CYCLOHEXANE CYCLOHEXANE	304 304		2.33 3.22		C16H2OO6 C16H2OO6	DIETHYLMALONATE, 3, 5-DIMETHOXYBENZAL
4967	OCTANOL	206		4.38	4.38 =	C16H21F3N2 C16H21N1O1	BENZIMIDAZOLE, 5-OCTYL-2-(TRIFLUDROMETHYL) N-CYCLOHEPTYLCINNAMAMIDE
4968 4969	CYCLOHEXANE CYCLOHEXANE	446 446		2.46		C16H21N101	N, N-HEPTAMETHYL ENECINNAMAMIDE
4970	CHCL3	405	31	2.86	2.21 8	C16H21N1O3 C16H21N1O3	HOMATROPINE Homatropine
4971 4972	N-HEPTANE OLEYL ALCOHOL	477 142		1.20	1.75	C16H21N184	2-METHOXY-4-ALLYLPHENOXYACETYLMORPHOLINE
4973 4974	BENZENE BENZENE	137 137		1.46 1.46	2.81 2.81	C16H22N102 C16H22N102	2-ME-5-PH-5-CARBETHOXY-2-AZABICYC(2,2,1)HEPTANE/EXO/ 2-ME-5-PH-5-CARBETHOXY-2-AZABICYC(2,2,1)HEPTANE/ENDO/
4975	DIETHYL ETHER	3		1.21	1.17 A	C16H22O11	GLUCOSE PENTA-ACETATE 2-ALLYLOXYL-4-CL-N(2-DIETAMINOET)-BENZAMIDE
4976	BENZENE OCTANOL	405 283	31	2.19 -1.31	2.07 B	C16H23CL1N2O2 C16H23N1O1.HCL	2.9-DIMETHYL-5-ET-2*-OH-6,7-BENZOMORPHAN/NIH#7938
4978	OC TANOL	283		-1.52	-1.52 =	C16H23N1O1.HCL	2,5-DIMETHYL-9-ET-2'-OH-6,7-BENZOMORPHAN/NIH#7951 N-HEPTYLCINNAMAMIDE
4979 4980	CYCLOHEXANE OLEYL ALCOHOL	446 142		2.72 1.46	2.01	C16H23N1C1 C16H23N1C2	2-METHOXY-4-ALLYLPHENDXYACETAMIDE, N-ME-N-PROPYL
4981	OLEYL ALCOHOL	142		2.51	3.05	C16H23N1O3	2-METHOXY-4-ALLYLPHENOXYACETAMIDE,N,N-DIETHYL 2-METHOXY-6-ALLYLPHENOXYACETAMIDE,N,N-DIETHYL
4982 4983	OLEYL ALCOHOL MIXED SOLV#1	142 433		1.82	2.37	C16H23N1O3 C16H23N3O4	BARBITURIC ACID, 1-(N.N-DIET-CARBAMYLME)-5.5-DIALLYL
4984	N-HEPTANE	416		1.48	1.01	C16H24CL1N1O3 C16H24N1O5	P-AMINOSALICYLIC ACID.9-CHLORONONYL ESTER Z-METHOXY-4-ETHOXYCARBONYLPHENOXYACETAMIDE.N.N-DIET
4985 4986	OLEYL ALCOHOL OCTANOL	142 438		1.07	1.07 =	C16H24G6	GLUCOPYRANOSIDE, 2-ISOPROPYL-5-MEPHENYL(BETA)
4987	OCTANOL N-HEPTANE	438 370		1.01	1.01 =	C16H24O6 C16H25N1O3	GLUCOPYRANDSIDE, 3-T-BUTYLPHENYL (BETA) P-AMINOSALICYLIC ACID, N-NONYL ESTER
4988 4989	DLEYL ALCOHOL	142		2.70	3.24	C16H25N1O3	2-METHOXY-4-PROPYLPHENOXYACETAMIDE,N.N-DIETHYL
4990	N-HEPTANE OLEYL ALCOHOL	370 473	14	1.15 2.81	3.38	C16H25N1O4 C16H25N1O4	P-AMINDSALICYLIC ACID, 9-HYDROXYNONYL ESTER 3-MED-4-ETD-BENZDIC ACID, DIETHYLAMINDETHYL ESTER
4992	OLEYL ALCOHOL	473		2.39	2.96	C16H25N1O5	3.4.5-TRIMETHOXYBENZOIC ACID.DIETHYLAMINOETHYL ESTER P-AMINOBENZOIC ACID.A.A.B-TRIME-B-(DIETAM)-ETHYL EST.
4993 4994	OLEYL ALCOHOL	460 460		3.43 3.48	3.96 4.04	C16H26N2O2 C16H26N2O2	P-AMINOBENZOIC ACID.A.B.B-TRINE-B-(DIETAM)-ETHYL EST.
4995	DCTANOL	449		4.14	4.14 =	C16H26N2O2	BENZOIC ACID, P-AMYLAMINO, N, N-DIMEAMINDETHYL ESTER BENZOIC ACID, P-AMYLAMIND, N, N-DIMEAMINDETHYL ESTER
4996 4997	OILS XYLENE	449 449		2.79 3.92	3.72 A	C16H26N2O2	BENZOIC ACID.P-AMYLAMINO,N,N-DIMEAMINOETHYL ESTER
4998	DI-BUTYL ETHER OCTANOL	449 373		3.33	1.12 =	C16H26N2O2 C16H27CL1N2O1	BENZOIC ACID, P-AMYLAMINO, N. N-DIMEAMINGETHYL ESTER NI-DECYLNICOTINAMIDE CHLORIDE
5000	BENZENE	478		-1.52	-0.51 B		PIPERIDINE, 1-DECYL, 3-CARBAHYL

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOL V	LOGP	EMPIRICAL FORMULA	NAME
5001	N-HEPTANE	479		5.31		C16H32O2	HEXADECANDIC ACID/PALMITIC ACID/ DIOCTYLPHOSPHATE
5002 5003	DIETHYL ETHER ME-I-BUT.KETONE	236 236		2.88 2.03	1.81	C16H34U4P1 C16H35U4P1	DIOCTYLPHOSPHATE
5004	BENZENE	480		0.11	1.51 A	C16H35O4P1 C16H35O4P1	PHOSPHORIC ACID, D1(2-ETHYLHEXYL) PHOSPHORIC ACID, D1(2-ETHYLHEXYL)
5005 5006	CCL4 NITROBENZENE	480 92		0.09 0.07		C16H36I1N1	TETRA-(N-BUTYL) AMMONIUM IODIDE
5007 5008	OCTANOL CYCLOHEXANE	268 141		-1.00 4.22	-1.00 =	C16H38BR2N2 G17H12CL1N1O2	DECAMETHONIUM BROMIDE 1,4-NAPHTHOQUINONE,2-CL,3-ANILINO,6-METHYL
5009	CYCLOHEXANE	304		3.83		C17H12O2	INDANE, 1, 3-DIONE, 2(2-METHYLBENZAL)
5010 5011	CYCLONEXANE DIETHYL ETHER	141	62	3.52 3.16	2.89 A	C17H12O2 C17H12O3	1.4-NAPHTHOQUINONE.2-METHYL.3-PHENYL 2-Hydroxynaphthoquinone.3-Phenylmethyl
5012	CYCLOHEXANE	304		3.44	2007	C17H12O3	INDANE, 1, 3-DIONE, 2(2-METHOXYBENZAL)
5013 5014	CYCLOHEXANE CYCLOHEXANE	141		3.05 4.22		C17H13N1O2 C17H13N1O2	1,4-naphthoquinone,2-anilino,6-methyl 1,4-naphthoquinone,2-methyl,3-anilino
5015	PRIM. PENTANOLS	481		2.34	2.62	C17H14N2O2	5-PYRAZOLONE, 1-PHENYL, 3-METHYL, 4-BENZOYL 2-HYDROXYNAPHTHOQUINONE, 3-(H-A-THIENYLPROPYL)
50 16 50 17	DIETHYL ETHER HEXANE	143 456		4.35 0.14	3.93 A	C17H14O3St C17H17CL1O6	7-CL-4,6,4'-TR [MED-6'-MEGRIS-3'-EN-3,2'-DIONE
5018	HEXANE	456		-0.10	2.18 =	C17H17CL106 C17H17CL106	DD-7-CL-4,6,2'-TRIMED-6'-MEGRIS-2'-EN-3,4'-DIONE GRISEDFULVIN
5019 5020	BC TANOL HEXANE	238 456		2.18 0.26	2.10 -	C17H17CL106	LD-7-CL-4,6,2*-TRIMED-6*-MEGRIS-2*-EN-3,4*-DIONE
5021 5022	N-HEPTANE DIETHYL ETHER	416 143		1.62 4.93	4.44 A	C17H18N2O6 C17H18O3	BIS(P-AMINOSALICYLIC ACID) PROPYL ESTER 2-HYDROXYNAPHTHOQUINONE, 3-CYCLOHEXYLMETHYL
5023	DIETHYL ETHER	465		3.70	3.36 A	C17H18O5	2-HYDROXYNAPHTHOQUINONE, 3-14-CARBOMETHOXYPENTYL)
5024 5025	HEXANE CHCL3	456 482		-0.44 -1.05	-0.37 N	C17H18O6 C17H19CL1N2O1SI	4,6,2'-TRIMEO-6'-MEGRIS-2'-EN-3,4'DIONE Chlorpromazine Sulfoxide
5026	DODECANE	475		-0.12		C17H19CL1N2O1S1	CHLORPROMAZINE-SUL FOXIDE
5027 5028	OCTANOL OCTANOL	475 483		-0.66 5.16	-0.66 = 5.16 =	C17H19CL1N2O1SL.HCL C17H19CL1N2S1	CHLORPROMAZINE—SULFOXIDE.HCL CHLORPROMAZINE
5029	OCTANOL	218	i	5.35	5.35 =	C17H19CL1N2S1	CHLORPROMAZINE
5030 5031	OCTANOL CYCLOHEXANE	56 484		5.32 0.95	5.32 =	C17H19CL1N2S1 C17H19CL1N2S1	CHLORPROMAZINE CHLORPROMAZINE
5032	CHCL3	482	68	1.09	1.62 N	C17H19CL1N2S1	CHLORPROMAZINE CHLORPROMAZINE
5033 5034	CHCL3 N-HEPTANE	482 485		2.10 1.86	2.55 N	C17H19CL1N2S1 C17H19CL1N2S1	CHLORPROMAZINE
5035	DODECANE	475	i	4.86	1.51 =	C17H19CL1N2S1 C17H19CL1N2S1.HCL	CHLORPROMAZINE CHLORPROMAZINE HYDROCHLORIDE
5036 5037	OCTANOL CHCL3	475 486		1.51	1.73 N	CITHIPCLINESI .HCL	CHLORPROMAZINE HYDROCHLORIDE
5038	OCTANOL	475		1.23	1.23 =	C17H19CL1N2S1.HCL C17H19CL1N2S1.HCL	1-CHLGRPROMAZINE HYDROCHLORIDE 3-CHLORPROMAZINE HYDROCHLORIDE
5039 5040	DCTANOL DODECANE	475 475		4.79	1017 -	C17H19CL1N2S1	1-CHLORPROMAZINE
5041	DODECANE OCTANOL	475 186		4.67 0.76	0.76 =	C17H19CL1N2S1 C17H19N103	3-CHLORPROMAZINE MORPHINE
5042 5043	DCTANOL	218		0.70	0.70 =	C17H19N103	MORPHINE
5044 5045	DIETHYL ETHER I-BUTANOL	3		-0.68 0.87	0.25 B	C17H19N1O3 C17H19N1O3	MORPHINE MORPHINE
5046	CHCL3	466	)	4.04	3.22 B	C17H20N2	DESDIMETHYLIMIPRAMINE DESDIMETHYLIMIPRAMINE
5047 5048	HEXANE Diethyl ether	466 457		2.38	1.89 A	C17H2ON2 C17H2ON2O2	1,4-NAPHTHOQUINDNE,2-CYCLOHEXYLMETHYLHYDRAZINO
5049	DIETHYL ETHER	457		2.13	1.99 A	C17H2ON2O2 C17H2ON2O2	1,4-NAPHTHOQUINONE,2-W-CYCLOPENTYLETHYLHYDRAZINO TROPIC ACID,N-ET-N-G-PICOLYLAMIDE
5050 5051	N-HEPTANE OCTANOL	477 127		2.28	2.28 =	C17H20N2O5S1	PENICILLIN, A-PHENDXYETHYL
5052 5053	I-BUTANOL OCTANOL	130		0.46 1.22	0.14 1.22 =	C17H2ON2O5S1 C17H2ON2O6S1	PENICILLIN.A+PHENOXYETHYL PENICILLIN.2.6-DIMETHOXYPHENYL
5054	OCTANDL	483	44	4.55	4.55 =	C17H2ON2S1	PROMAZINE
5055 5056	CHCL3 CHCL3	482 482		0.59 1.43	1.16 N 1.94 N	C17H2ON2S1 C17H2ON2S1	PRCMAZINE PROMAZINE
5057	N	485	14	1.71		C17H2ON2S1 C17H2ON2S1	PROMAZINE Promazine
5058 5059	CYCLOHEXANE	475		1.50		C17H20N251	PROMETHAZINE
5060 5061	CHCL3 CHCL3	482 482		-1.22 1.76	-0.53 N 2.25 N	C17H2ON2S1 C17H2ON2S1	PROMETHAZINE PROMETHAZINE
5062	DIETHYL ETHER	487	7	-3.80		C17H20N4O6	RIBOFLAVIN
5063 5064	N-BUTANOL 1-BUTANOL	487		-0.17 -0.33	-0.75 -0.97	C17H2ON4O6 C17H2ON4O6	RI BOFLAVIN RI BOFLAVIN
5065	PRIM. PENTANOLS	487	7	-0.77	-1.28	C17H2ON4D6	RI BOFL AV IN
5066 5067	CACTOHE XVNOT	487 487		-0.92 -0.27	-1.25 -1.46	C17H2ON4O6 C17H2ON4O6	RI BOFL AVIN RI BOFL AVIN
5068 5069	PARAFFINS Diethyl ether	487		-4.70 5.65	5.06 A	C17H2ON4O6	RIBOFLAVIN 2-Hydroxynaphthoquinone, 3- I-Heptyl
5070	DIETHYL ETHER	465	62	2.24	2.09 A	C17H2OU4	2-HYDROXYNAPHTHOQUINONE, 3-(5-OH-5-METHYLHEXYL)
5071 5072	DCTANOL CHCL3	475 486		0.91 0.73	0.91 = 1.25 N	C17H21CL1N2S1 C17H21CL1N2S1	PROMAZINE HYDROCHLORIDE PROMAZINE HYDROCHLORIDE
5073	CHCL 3	396	31	3.15	2.47 B	C17H21N1	BENZPHETAMINE
5074 5075		396 276		1.87 3.30	3.30 =	C17H21N1 C17H21N1O1	BENZPHETAMINE Benadryl /PKA= 8.98/ .
5076		218	3	3.27	3.27 × 3.40 =	C17H21N101	DIPHENHYORAMINE DIPHENHYORAMINE
5077 5078	N-FEPTANE	216 477	7	1.26		C17H21N1O1	DI PHENHY DRAMINE
5079 5080	DIETHYL ETHER DILS	462		2.14	2.73 B 1.92 B	C17H21N1O4 C17H21N1O4	COCAINE COCAINE
5081	I-BUTANOL	4	•	2.03	2.34	C17H21N1O4	COCAINE
5082 5083	N-PEPTANE Diethyl ether	477 457		-2.36 2.86	2.63 A	C17H21N104 C17H22N2O2	SCOPOLAMINE 1,4-naphthoquinone,2-heptylhydrazino
5084		304	•	4.00		C17H22O5	DIETHYLMALONATE, 3-PROPOXYBENZAL
50 8 5 50 8 6		446		2.48 3.11		C17H23N101	N-CYCLOGCTYL CINNAMAMIDE N.N-OCTAMETHYL ENECINNAMAMIDE
5087	OCTANOL	218	3	1.79	1.79 = 1.83 =	C17H23N1O3	AT ROPINE AT ROPINE
5088 5089	DIETHYL ETHER	3	17	0.61	1.39 B	C17H23N1O3	AT ROPINE
5090 5091	[-BUTANOL	488	12	1.94	2.22	C17H23N1O3 C17H23N1O3	ATROPINE ATROPINE
5092	N-PEPTANE	477	•	-3.25		C17H23N1O3	ATROPINE
5093 5094		142 276		2.20 2.85	2.74 2.85 =	C17H23N1O3 C17H23N3O1	2-METHOXY-4-ALLYLPHENDXYACETYLPIPERIDINE MEPYRAMINE / PKA = 8.85/
5095	OLEYL ALCOHOL	489	27	2.15	2.70	C17H23N3O2	CINCHONINAMIDE.N-(2-DIETHYL-AMINOETHYL)-2-METHQXY
5096 5097		477	17	-2.89 0.33	0.05 B		ATURBAN 1-(M-CLBENZYL)-3-N-DIETCARBAMOYL)PIPERIDIN
5098 5099	CHCL3 CYCLOHEXANE	490		0.40 3.21	0.11 8		1-(P-CLBENZYL)-3-N-DIETCARBAMOYL)PIPERIOIN N-OCTYLCINNAMAMIDE
5100	OLEYL ALCOHOL	1 42		2.97	3.51	C17H25N103	2-METHOXY-4-ALLYLPHENDXYACETAMIDE, N-ME, N-BUTYL

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
5101	OLEYL ALCOHOL	142		2.75	3.29	C17H25N103	2-METHOXY-4-ALLYLPHENOXYPROPIONAMIDE.N.N-DIETHYL
5102 5103	CHCL 3	491 490	46 17	-1.62 -0.12	-0.12 B	C17H25N1O7S1 C17H25N3O3.HBR	ATROPINE SULFATE 1-(M-NO2BENZYL)-3-(N-DIETCARBAMOYL)PIPERIDINE
5104	CHCL3	490	17	0.00	-0.23 B	C17H25N3O3.HBR	1-(P-NO28ENZYL)-3-(N-DIETCARBAMOYL)PIPERIDINE
5105 5106	N-HEPTANE CHCL3	416 490	14 17	1.68	-0.25 B	C17H26CL1N1O3 C17H26N2O1.HBR	P-AMINOSALICYLIC ACID:10-CHLORODECYL ESTER 1-BENZYL-3-(N:N-DIETCARBAMOYL)PIPERIDINE-HBR
5107	HIXED SOLV#1	433	_	2.23	-0.25 0	C17H26N2O3	BARBITURIC ACID, 1-N-HEPTYL-5, 5-DIALLYL
5108 5109	CYCLOHEXANE CHCL 3	474 474	14 14	-0.77 1.17	Q.77 B	C17H26N4O3S2 C17H26N4O3S2	THIAMINE TETRAHYDROFURFURYL DISULFIDE THIAMINE TETRAHYDROFURFURYL DISULFIDE
5110	BENZENE	474	14	-2.52		C17H26N4Q352	THIAMINE TETRAHYDROFURFURYL DISULFIDE
5111 5112	ETHYL ACETATE N-HEPTANE	474 370	14 14	0.07 2.08	0.06	C17H26N4O3S2 C17H27N1O3	THIAMINE TETRAHYDROFURFURYL DISULFIDE P-AMINOSALICYLIC ACID: DECYL ESTER
5113	OLEYL ALCOHOL	473		4.27	4.84	C17H27N103	4-BUTOXYBENZOIC ACID, DIETHYLAMINOETHYL ESTER P-AMINOSALICYLIC ACID, 10-HYDROXYDECYL ESTER
5114 5115	N-HEPTANE OLEYL ALCOHOL	370 473	14	1.24 3.52	4.09	C17H27N104 C17H27N104	2,4-DIETHOXYBENZOIC ACID, DIETHYLAMINOETHYL ESTER
5116	OLEYL ALCOHOL	473		3.37	3.90	C17H27N104	3.4-DIETHOXYBENZOIC ACID, DIETHYLAMINOETHYL ESTER P-AMINOBENZOIC ACID, TETRAME-B-(DIETAM)-ETHYL ESTER
5117 5118	OLEYL ALCOHOL DIETHYL ETPER	460 378	44	3.29 1.10	3.82 1.90 B	C17H28N2O2 C17H28N2O3	N-M-BUTOXYPHENYLCARBAMIC ACID.DIETAMINOET.ESTER
5119	DIETHYL ETHER	378	44	1.09	1.89 B	C17H28N2O3 C17H28N2O3	N-O-BUTOXYPHENYLCARBAMIC ACID.DIETAMINOET.ESTER N-P-BUTOXYPHENYLCARBAMIC ACID.DIETAMINOET.ESTER
5120 5121	DIETHYL ETHER	378 464	44 46	1.07 2.70	2.00 B	C17H29N10651	N-ME-3-METHOXYCARBONYLPYRIDINIUM NONYLSULFATE
5122	OCTANOL	65	46	-0.29	-0.29 =	C17H308R1N1	BENZYLDIMETHYLOCTYLAMMONIUM BROMIDE DODECYLPYRIDINIUM BROMIDE
5123 5124	OCTANOL OCTANOL	65 348	46	0.44 1.28	0.44 = 1.28 =	C17H30BR1N1 C17H31N1O2	N-DODECANDYLCYCLOBUTAN ECAR BOXAMIDE
5125	BENZENE	478		-1.15	-0.25 B	C17H34N2O1	PIPERIDINE,1-DECYL,3-(N-METHYLCARBAMYL) TRIPENTYL-ETHYL-AHMONIUM IODIDE
5126 5127	OCTANOL CCL4	297 412	46	-0.22 2.05	-0.22 =	C17H38 [ 1N] C18H12CU1N2O2	8-QUINOLINOLO(BIS)-CU(II)
5128	CHCL3	412		3.48	. 72 -	C18H12CU1N2O3 C18H14N2O3	8-QUINDLINDLO(BIS)-CU(II) 1,4-naphthoguindne, 2-acetamido-3-anilino
5129 5130	OCTANOL CYCLOHEXANE	141		1.73	1.73 =	C18H14N2O3	1, 4-NAPHTHOQUINONE, 2-ACETAMIOO, 3-ANILINO
5131	DIETHYL ETFER	143	62	4.04	3.68 A	C18H14O3	2-HYDROXYNAPHTHOQUINONE.3-(W-PHENYLETHYL) TRIPHENYLSULFONIUM BROMATE
5132 5133	CHCL3	96 96		-0.42		C18H15BR103S1 C18H15BR1S1	TRIPHENYLSULFONIUM BROMIDE
5134	CHCL3	96		-0.63		C18H15CL1S1	TRIPHENYLSULFONIUM CHLORIDE TRIPHENYLSULFONIUM LODATE
5135 5136	CHCL 3	96 96		-2.52 1.12		C18H15 I 103S 1 C18H15 I 1S1	TRIPHENYLSULFONIUM [ODIDE
5137	CHCL3	96		-1.00		C18H15N102S1	TRIPHENYLSULFONIUM NITRITE TRIPHENYLSULFONIUM NITRATE
5138 5139	CHCL 3 OCTANOL	96 56		-0.29 2.87	2.87 =	C18H15N103S1 C18H1501P1	PHOSPHINE OXIDE, TRIPHENYL
5140	CHCL 3	96	32	1.01		C18H17CR104S1 C18H17CR104S1	TRIPHENYLSULFONIUM CHROMATE TRIPHENYLSULFONIUM CHROMATE
5141 5142	CHCL3	96 96	33	-0.15 -1.00		C18H17O4P1S1	TRIPHENYLSULFONIUM PHOSPHATE
5143	DCTANUL	56		-0.89	-0.89 =	C18H18N2O7S1 C18H19CL1O6	CEPHALOSPORANIC ACID,7(D-MANDELAMIDD) 7-CL-2*-ETD-4,6-DIMEO+6*-MEGR1S-2*-EN-3,4*-DIONE
5144 5145	HEXANE HEXANE	456 456		0.57		C18H19CL106	7-CL-4*-ET0-4,6-DIMED-6*-MEGRIS-3*-EN-3,2*-DIDNE
5146	OCTANOL	483 482	44 68	5.19 1.30	5.19 = 1.82 N	C18H19F3N2S1 C18H19F3N2S1	TRIFLUPROMAZINE TRIFLUPROMAZINE
5147 5148	CHCL3	482	69	1.76	2.25 N	C18H19F3N2S1	TRIFLUPROMAZINE
5149 5150	N-HEPTANE DODECANE	485 475	14	1.15 5.14		C18H19F3N2\$1 C18H19F3N2\$1	TRIFLUPROMAZINE TRIFLUPROMAZINE
5151	MIXED SOLV#1	433		0.30		C18H19N3O4	BARBITURIC ACID, 1-(N-PHENYLCARBAMYLME)-5,5-DIALLYL
5152 5153	OCTANOL CHCL3	475 486	46 46	1.78	1.78 = 1.92 N	C18H2OCL1F3N2S1 C18H2OGL1F3N2S1	TRIFLUPROMAZINE HYDROCHLORIDE TRIFLUPROMAZINE HYDROCHLORIDE
5154	MIXED SOLV#1	433		2.36		C18H2ON2O3	BARBITURIC ACID,1-B-PHENYLETHYL-5,5-DIALLYL BIS(P-AMINOSALICYLIC ACID) BUTYL ESTER
5155 5156	N-FEPTANE CHCL3	416 482	14 68	1.74 0.88	1.43 N	C18H2ON2O6 C18H2ON2S1	METHOLLAZINE
5157	CHCL 3	482		1.92	2.40 N	C18H2ON2S1 C18H2ON2S1	METHOILAZINE PYRATHIAZINE
5158 5159	CHCL3	482 482	68 69	1.14	1.67 N 2.36 N	C18H2ON2S1	PYRATHIAZINE
5160	OCTANOL Diethyl ether	218 143	62	5.07 5.64	5.07 = 5.06 A	C18H2OO2 C18H2OO3	4,4'-STILBENEDIOL,A,A'-DIETHYL 2-HYDROXYNAPHTHOQUINONE,3-(W-CYCLOHEXYLETHYL)
5161 5162	OCTANOL	276		4.36	4.36 =	C18H20O3S1	2-OH-3-CARBOXY-5-ME-BENZTHIO-Z'-I-PROPYLPHENYLETHER
5163	DIETHYL ETHER	276 465	62	4.91 3.40	4.91 = 3.10 A	C18H2OG4 C18H2OG5	2-OH-3-CARBOXY-5-ME-BENZYL-2"-I-PROPYLPHENYLETHER 2-HYDROXYNAPHTHOQUINONE,3-(2-ME-5-CARBOMETHOXYPENT)
5164 5165	DIETHYL ETPER	143		3.82	3.47 A	C18H2O05	2-HYDROXYNAPHTHOQUINONE, 3- (W-ME-W-CARBOMETHOXYPENT)
5166 5167	DODECANE Diethyl ether	475 492	17	5.07 0.19	1.01 8	C18H21CL1N2\$1 C18H21N1O3	BUTYL "CHLORPROMAZINE" CODEINE
5168	DIETHYL ETHER	3	17	-0.10	0.78 8	C18H21N1O3	CODEINE
5169 5170	DIETHYL ETHER CHCL3	359 493		0.03 1.94		C18H21N1O3 C18H21N1O3	CODE INE
5171	CHCL 3	359		2.17	1.63 B	C18H21N103	CODEINE
5172 5173	I-BUTANOL CCL4	4 492		1.21	1.19	C18H21N1O3 C18H21N1O3	CODE INE
5174	CF CF 5 CH 5 CF	492		-1.32		C18H21N1O3	CODEINE DICODIDE /DIHYDROCODIENONE/
5175 5176	ETHYL OLEATE ETHYL OLEATE	494 494		1.29		C18H21N103 C18H21N104	EUCODAL /OXYCODONE/
5177	CYCLOHEXANE	495		0.78		C18H21N3	BENZIMICAZOLE, L-DIMETHYLAMINOETHYL, 2-BENZYL N-METHYLCHLORPROMAZINE CHLORIDE
5178 5179	OCTANOL OCTANOL	56 483		-0.15 4.28	4.28 =	C18H22CL1N2S1 C18H22N2	DESIPRAMINE
5180	DIETHYL ETHER	466		2.88		C18H22N2	DESIPRAMINE DESIPRAMINE
5181 5182	CHCL3 HEXANE	466 466		3.82 2.27		C18H22N2 C18H22N2	DESIPRAMINE
5183	CHCL3	466 466		2.43		C18H22N2O1 C18H22N2O1	10-HYDROXYDESIMIPRAMINE 2-Hydroxydesipramine
5184 5185		466		1.99		C18H22N2O1	2-HYDROXYDES IPRAMINE
5186 5187	HEXANE OCTANOL	466 483	44	0.72 4.90	4.90 =	C18H22N2O1 C18H22N2O1S1	2-HYDROXYDESIPRAMINE METHOPROMAZINE
5188	N-HEPTANE	485	14	1.51		C18H22N2O1S1	METHOPROMAZINE METHOXYPROMAZINE
5189 5190	CHCL3 CHCL3	482 482		0.71 1.38		C18H22N2O1S1 C18H22N2O1S1	METHOXYPROMAZINE
5191	OCTANOL	56		3.50	3.50 =	C18H22N2O2S2	PHENOTHIAZINE, 2-MESULFONYL-10-(3-DIMEAMINOPROPYL) PENICILLIN, 1-PHENOXYPROPYL/PROPICILLIN/
5192 5193	OCTANOL OCTANOL	127 127		2.65 2.76		C18H22N2O5S1 C18H22N2O5S1	PENICILLIN, 2-PHENOXY-2-PROPYL
5194	I - BUTANOL	1 30	12	0.66	0.42	C18H22N2O5S1 C18H22N2S1	PENICILLIN, 1-PHENOXYPROPYL/PROPICILLIN/ Trimeprazine
5195 5196	CHCL3 CHCL3	482	68 68	1.06	1.67 N	C18H22N2S2	THIOMETHYLPROMAZINE
5197 5198	CHCL3 CYCLOHEXANE	482 141	69	1.88 3.45	2.36 N	C18H22N2S2 C18H22O2S2	THIOMETHYLPROMAZINE 1,4-NAPHTHOQUINONE,2,3-DIBUTYLTHIO
5199	DIETHYL ETFER	496		-0.18		C18H22O4	6-OXOESTRIOL
5200	ETHYL ACETATE	496		0.75	0.75	C18H22O4	6-OXOESTRIOL

NO.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
				0.07	1 ( A	C18H23CL1N2O151	METHOXYPROMAZINE HYDROCHLORIDE
5201 5202	CHCL3 N-HEPTANE	486 477	46	0.97 1.49	1.46 N	C18H23N101	DR PHENADR INE
5203	CYCLOHEXANE	141		3.44		C18H23N1O2S1	1, 4-NAPHTHOQUINONE, 2-BUTYLAMINO, 3-BUTYLTHIO
5204 5205	OLEYL ALCOHOL DIETHYL ETFER	1 42 496		2.57 0.89	3.14 C.90 A	C18H23N1O3 C18H24O3	2-METHOXY-4-ALLYLPHENOXYACETAMIDE,N,N-DIALLYL ESTRIOL
5206	ETHYL ACETATE	496		1.38	1.43	C18H24O3	ESTRIOL
5207	DIETHYL ETFER	496		-0.92	-0.69 A	C18H24O4	6-A-HYDROXYESTRIOL 6-A-HYDROXYESTRIOL
5208 5209	ETHYL ACETATE CYCLOHEXANE	496 304		-0.05 3.62	-0.09	C18H24O4 C18H24O5	DI ETHYLMAL ONATE, 3-BUTO XYBENZAL
5210	CHCL3	497		3.67	2.91 8	C18H25N1O1	DEXTROMETHORPHAN
5211	OLEYL ALCOHOL	489 497	27 46	2.56 2.55	3.10	C18H25N3O2 C18H26BR1N1O1	CINCHONINAMIDE,N-(2-DIETHYL+AMINOETHYL)-2-ETHOXY DEXTROMETHORPHAN HYDROBROMIDE
5212 5213	CHCL3 CHCL3	497	46	1.77		C18H26CL1N101	DEXTROMETHORPHAN HYDROCHLORIDE
5214	CHCL3	497	46	3.11		C18H2611N101	DEXTROMETHORPHAN HYDROIDDIDE
5215 5216	N-PEPTANE CYCLOHEXANE	498 446	26	-0.07 3.17		C18H26O2 C18H27N1O1	TESTOSTERONE, 19-NOR/NANDROLONE/ N-NONYLCINNAMAMIDE
5217	N-FEPTANE	477	•	2.33		C18H27N1O2	CARAMIPHEN
5218 5219	OLEYL ALCOHOL	142 142		3.07 1.42	3.61 1.97	C18H27N1D3 C18H27N1D4	2-METHOXY-4-ALLYLPHENOXYACETAMIDE,N,N-DIPRCPYL 2-METHOXY-4-ALLYLPHENDXYETHOXYACETAMIDE,N,N-DIETHYL
5220	OLEYL ALCOHOL	142		1.26	1.81	C18H27N1D5	B-(2-MED-4-ALLYLPHENOXY)-ETHANOLOXYACETAMIDE,N+N-DIET
5221	CHCL3	490	17	0.75	0.41 B	C18H28N2O1.HBR C18H28N2O1.HBR	I-(M-MEBENZYL)-3-(N-DIETCARBAMOYL)PIPERIDINE I-(P-MEBENZYL)-3-(N-DIETCARBAMOYL)PIPERIDINE
5222 5223	CHCL3	490 490	17 17	0.51 0.33	0.20 B	C18H28N2D2.HBR	L- (M-MEOBENZYL)-3-IN-DIETCARBAMOYL)PIPERIDINE
5224	CHCL3	490	17	0.30	0.03 B	C18H28N2O2.HBR	1-(P-MEOBENZYL)-3-(N-DIETCARBAMOYL)PIPERIDINE
5225 5226	I-OCTANOL I-OCTANOL	353 353		-0.35 -0.45		C18H29K103S1 C18H29NA103S1	POTASSIUM DODECYL BENZENESULFONATE SODIUM DODECYL BENZENESULFONATE
5227	OCTANE	57		3.74		C18H30D3	P-T-OCTYLPHENOXYMONOETHOXYETHANOL/OPE-1/
5228	CHCL3	464		2.97		C18H31N1O6S1	N-ME-3-ETHOXYCARBONYLPYRIDINIUM NONYLSULFATE N-ME-3-METHOXYCARBONYLPYRIDINIUM DECYLSULFATE
5229 5230	CHCL3 N-PEPTANE	464 479		3.06 5.08		C18H31N1O6S1 C18H32O2	LINOLEIC ACID
5231	N-FEPTANE	479	31	5.36		C18H34O2	OLEIC ACID
5232 5233	BENZENE BENZENE	478 478		-0.42 -0.70	0.26 B	C18H36N2O1 C18H36N2O1	PIPERIDINE, 1-DECYL, 3-(N-ETHYLCARBAMYL) . PIPERIDINE, 1-DECYL, 3-(N,N-DIMETHYLCARBAMYL)
5234	N-FEPTANE	479		5.43	0.00 5	C18H36O2	OCTADECANDIC ACID/STEARIC ACID/
5235	CHCL3	96		0.00		C19H15N1S2	TRIPHENYLSULFONIUM THIOCYANTE N-PHENYL-P-PHENYLBENZAMIDINE
5236 5237	PARAFFINS Paraffins	499 499		1.98		C19H16N2 C19H16N2	N-PHENYL-P-PHENYLBENZAMIOINE
5238	DIETHYL ETHER	143	62	4.43	4.00 A	C19H16O3	2-HYDROXYNAPHTHOQUINONE, 3-(W-PHENYL PROPYL)
5239 5240	I-BUTANOL I-BUTANOL	130		1.06 0.75	0.98 0.55	C19H17CL2N305S1 C19H18CL1N305S1	DICLOXAGILLIN CLOXAGILLIN
5241	I-BUTANOL	130		0.59	0.32	C19H19N3O5S1	DXACILLIN
5242	OCTANOL DISTURY STEED	56		3.28	3.28 = 4.90 A	C19H2ON2O3 C19H2OO3	OXYPHENBUTAZONE 2-HYDROXYNAPHTHOQUINONE,3-(W-CYCLOHEXEN-3YL+PROPYL)
5243 5244	DIETHYL ETHER HEXANE	143 456		5.45 0.99	4.70 A	C19H21CL106" 11	7-CL-4,6-DIMEQ-6'-ME-2'-PROPOXYGRIS-2'-EN-3,4'-DIONE
5245	HEXANE	456		1.38		C19H21CL106	7-CL-4,6-DIMEO-6'-ME-4'-PROPOXYGRIS-3'-EN-3,2'DIONE
5246 5247	HEXANE CHCL3	456 482		0.98 1.51	2.02 N	C19H21CL106 C19H21F3N2S1	7-CL-6,2*-DIETO-4-MEO-6*-MEGRIS-2*-EN-3,4*-DIONE RHODIA#7746/TRIFLUOTRIMEPRAZINE/
5248	CHCL3	482		2.02	2.49 N	C19H21F3N2S1	RHODIA#7746/TRIFLUOTRIMEPRAZINE/
5249	I-BUTANOL	4		2.02	2.34	C19H21N1O3	THEBAINE THEBAINE (PARAMORPHINE)
5250 5251	DIETHYL ETHER OCTANOL	483	17 44	1.21 3.96	1.91 B 3.96 =	C19H21N1O3 C19H21N1S1	DOSULEPINE
5252	CHCL 3	482		0.64	1.21 N	C19H21N3S1	CYAMEPROMAZINE
5253 5254	CHCL3 OCTANOL	482 276		1.11 3.92	1.64 N 3.92 =	C19H21N3S1 C19H22N2	CYAMEPROMAZINE TRIPROLIDINE /PKA = 9.50/
5255	CHCL3	482		0.59	1.16 N	C19H22N2O1\$1	ACEPROMAZINE
5256 5257	CHCL3 N-FEPTANE	482 485		2.29 0.88	2.74 N	C19H22N2O1S1 C19H22N2O1S1	AC EPROMAZINE AC EPROMAZINE
5258	N-HEPTANE	416	14	1.95		C19H22N2O6	BIS(P-AMINOSALICYLIC ACID) AMYL ESTER
5259	CHCL3	482		0.85	1.40 N	C19H2ZN2S1 C19H2ZN2S1	MEPAZINE MEPAZINE
5260 5261	CHCL3 CHCL3	482 500		1.60	2.10 N	C19H22N403\$1	THIAMINE, S-BENZOYL
5262	CHCL3	500		0.45		C19H22N4O3S2	THIAMINE, O-BENZOYL
5263 5264	DIETHYL ETHER DIETHYL ETHER	143 465		5.93 3.92	5.31 A 3.56 A	C19H22O3 C19H22O4	2-HYDROXYNAPHTHOQUINONE,3-(W-CYCLOHEXYLPROPYL) 2-HYDROXYNAPHTHOQUINONE,3-(2-METHYLOCTYL-7-ONE)
5265	DIETHYL ETHER	465	62	3.20	2.93 A	C19H22O5	2-HYDROXYNAPHTHOQUINONE, 3-(8-CARBOXYOCTYL)
5266 5267	DIETHYL ETFER OCTANOL	465 483		4.10 3.88	3.72 A 3.88 =	C19H22O5 C19H23CL1N2	Z-HYDROXYNAPHTHOQUINONE, 3-(2-ME-6-CARBOMETHOXYHEX) CHLORIMIPRAMINE
5268	DIETHYL ETHER	501		-0.88		C19H23N3O2	ERGOMETRINE/ERGONIVINE/
5269	DIETHYL ETFER	501 500	17	0.41	1.21 B	C19H23N3U2 C19H23N4U6P1S1	ERGOMETRININE THIAMINE MONOPHOSPHATE,S-BENZOYL
5270 5271	CHCL3 50%ETHER+50%DMF	125		-2.40 0.23	1.37	C19H24CL1N101	21A-ME-A-P-CLPHENYLBENZYL-CXY)-N,N-DIMEPROPYLAMINE
5272	OCTANOL	483	44	4.62	4.62 =	C19H24N2	IMIPRAMINE
5273 5274	DIETHYL ETFER CHCL3	466 466		2.75 3.30	2.54 A 2.60 B	C19H24N2 C19H24N2	IMIPRAMINE IMIPRAMINE
5275	HEXANE	466		2.82		C19H24N2	IMIPRAMINE
5276 5277	CHCL3 DIETHYL ETHER	466 466		1.69	1.22 B 1.30 A	C19H24N2O1 C19H24N2O1	10-HYDROXYIMIPRAMINE 2-HYDROXYIMIPRAMINE
5278	CHCL3	466		2.17	1.63 8	C19H24N2O1	2-HYDROXYIMIPRAMINE
5279	HEXANE	466		0.13		C19H24N2O1	2-HYDROXYIMIPRAMINE
5280 5281	DIETHYL ETHER CHCL3	466 466		-1.12 1.54	-0.86 A	C19H24N2O1 C19H24N2O1	IMIPRAMINE-N-OXIDE IMIPRAMINE-N-OXIDE
5282	HEXANE	466		-0.95		G19H24N2O1	IMIPRAMINE-N-OXIDE
5283 5284	CHCL3	482 482		1.02	1.57 N 2.41 N	C19H24N2O1S1 C19H24N2O1S1	METHOTRIMEPRAZINE METHOTRIMEPRAZINE
5285	DIETHYL ETFER	378	44	0.99	1.80 8	C19H24N2O2	N. N-DIPHENYLCARBAMIC ACID. DIETAMINGETHYL ESTER
5286	DIETHYL ETHER	457	62	3.08	2.82 A		1,4-NAPHTHOQUINONE,2-W-CYCLOHEXYLPROPYLHYDRAZINO
5287 5288	CHCL3 CHCL3	482 482		1.29	1.81 N 2.15 N	C19H24N2S2 -: C19H24N2S2	METHIOMEPRAZINE METHIOMEPRAZINE
5289	CYCLOHEXANE	474	14	0.63		C19H24N4U2S2	THIAMINE BENZYL DISULFIDE
5290 5291	CHCL3 BENZENE	474 474		1.42 -1.52	1.00 B	C19H24N4O2S2 C19H24N4O2S2	THIAMINE BENZYL DISULFIDE THIAMINE BENZYL DISULFIDE
5292	ETHYL ACETATE	474	14	1.68	1.77	C19H24N402S2	THIAMINE BENZYL DISULFIDE
5293 5294	N-HEPTANE N-FEPTANE	498 498		0.34 0.89		C19H24O2 C19H24O2	1,4-ANDROSTADIENE-3,17-DIONE 4,6-ANDROSTADIENE-3,17-DIONE
5295	DIETHYL ETHER	143	62	6.70	5.98 A	C19H24O3	2-HYDROXYNAPHTHOQUINONE, 3-NONYL
5296 5297	DIETHYL ETHER CHCL3	465 486		3.38 1.04	3.09 A 1.54 N	C19H24O4 C19H25CL1N2O151	2-HYDROXYNAPHTHOQUINONE,3-(7-DH-7-METHYLOCTYL) METHOTRIMEPRAZINE HYDRQGHLORIDE
5298	CYCLOHEXANE	446		3.50		C19H25N1O1	N, N-DICYCLOPENTYLCINNAHAMIDE
5299 5300	OCTANOL N-HEPTANE	235 421		3.83 3.64	3.83 =	C19H25N1O1 C19H25N1O1	PROPOXYPHENE CARBINOL PROPOXYPHENE CARBINOL
2200	THE TAIL	721	77	2.04			

NO.	SOLVENT	2 E F	FOUT	LÚGP	LOGP	EMPIRICAL	NAME
5301	CHCL 3	482	NOTF	50LV -1.15	OCT -0.47 N	FORMULA C19H25N3S1	AM I NOPROMA Z I NE
5302	CHCL 3	482	69	1.95	2.43 N	C19H25N3S1	AM INDPROMAZ INE
5303 5304	NIETHYL ETHER N-HEPTANE	457 498	62	3.93 C.97	3.57 A	C19H26N2C2 C19H26O2	1, 4-NAPHTHOQUINONE, 2-NONYLHYDRAZINO 4-ANDROSTENE-3, 17-DIONE
5305	CHCL 3	491	46	-2.00	2 77	C19H27HR1N1O3 C19H27N3O2	AT ROPINE-ETHYLBROMIDE CINCHONINAMIDE,N-{2-DIETHYL-AMINOETHYL}-2-PROPOXY
5306 5307	OLEYL ALCOHOL CHOL3	489 464	27 46	3.24 2.98	3.77	C19H28BR1N104S1	N-METHYL-6-BROMOQUINOLINIUM NONYLSULFATE
5308 5309	CHCL 3	464 464	46 46	2.86 3.29		C19H28CL1N10451 C19H28I1N10451	N-METHYL-6-CHLOROQUINOLINIUM NONYLSULFATE N-METHYL-2-IOOOQUINOLINIUM NONYLSULFATE
531n	N-FEPTANE	498	70	0.49		C19H28O2	EPITESTOSTERONE
5311 5312	OCTANOL OCTANOL	261 65		3.32	3.37 = 3.31 =		TESTOSTERONE TESTOSTERONE
5313	DIETHYL ETHER	502 498		1.94	3.20 S	C19H2802 C19H2802	TESTUSTERONE TESTOSTERONE
5314 5315	<b>N-FEPTANE</b> <b>N-FEPTANE</b>	477		0.32 2.51		C19H29N1C1	CYCRIMINE
5316 5317	N-PEPTANE N-FEPTANE	477 498		1.75		C19H29N1C1 C19H29N1C2	PROCYCLIDINE TESTOSTERONE OXIME
5318	CHCL3	503	46	2.77		C19H29N104S1	N-METHYL-I-QUINOLINIUM NONYLSULFATE N-METHYLQUINOLINIUM NONYLSULFATE
5319 5329	CHCL3	464 464	46 46	2.79 3.13		C19H29N10451 C19H29N10551	N-ME-8-DH-QUINDLINIUM NONYLSULFATE
5321 5322	CHCL 3 DLFYL ALCOHOL	503 473	46	3.00 4.28	4.85	C19H3ON2O4S1 C19H31N1O4	1-METHYL-3-AMINOQUINOLINIUM NONYLSULFATE 3-ETO-4-BUTOXYBENZOIC ACID+DIETHYLAMINGETHYL ESTER
5323	OLEYL ALCOHOL	473		3.78	4.35	C19H31N1O5	3,4,5-TRIETHOXYBENZOIC ACID,DIETHYLAMINDETHYL ESTER N-ME-3-ETHOXYCARBONYLPYRIDINIUM DECYLSULFATE
53 24 53 25	CHCL 3	464 464	46 46	3.27 3.36		C19H33N1O6S1 C19H33N1O6S1	N-ME-3-METHOXYCARBONYLPYRIDINIUM UNDECYLSULFATE
5326 5327	OCTANOL OCTANOL	65 65	46 46	-0.08	-0.08 = 1.32 =	C19H34BR1N1 C19H34BR1N1	BENZYLDIMETHYLDECYLAMMONIUM BROMIDE TETRADECYLPYRIDINIUM BROMIDE
5328	N-PEPTANE	443	10	3.30		C20H13N151	PHENOT FIAZINE, 3, 4, 6, 7-DIBENZO
5329 5330	N-FEPTANE CHCL3	443 412		5.26 4.45		C20H13N1S1 C20H16CUIN2O2	PHENOTHIAZINE, 1, 2, 8, 9-DIBENZO 8-QUINOLINOLO(2-METHYL)(BIS)-CU(II)
5331	CHCL 3	412		4.56		C2CH16CU1N2O2	8-QUINOLINOLO(4-METHYL)(BIS)-CU(II) 8-QUINOLINOLO,4-METHYL(BIS)-CU(II)
5332 5333	CCL4 CCL4	412 412		3.29 3.50		C2CH16CU1N2D2	8-QUINOLINOLO, Z-METHYL (BIS)-CU(11)
5334 5335	OCTANOL DIETHYL ETFER	227 465	62	1.74	1.74 = 2.67 A	C20H16NZC4 C20H16O4	CAMPTOTHECIN (NCS 9460C) 2-HYDROXYNAPHTHOQUINONE,3-(3-P-TOLYLPROPYL-3-ONE)
5336	CYCLOHEXANE	141		4.40	3.67 =	C2GH19N10Z51 C2GH19N103	1,4-NAPHTHOQUINONE,2-ANILINO,3-BUTYLTHIO ACRONYCINE (NCS 403169)(PKA IN 40% MEOH= 3.40)
5337 5338	OCTANOL I-BUTANOL	227 4		3.67 -1.15	-2.12	C20H19N105	BERBERINE
5339 5340	OCTANOL OCTANOL	504 227	40 61	1.16	1.16 =	C20H19N108 C2CH22N805	4-DEDIMETHYLAMINOTETRACYCLINE METHOTREXATE (PKA IN 30% MEDH = 4.70)
5341	CHCL 3	482	6.8	2.17	2,63 ₩	C2CH23CL1N2S1	SANDOZ#6524 2'-BUTOXY-7-CL-4,6-DIMEO-6'-MEGRIS-2'-EN-3,4'-DIONE
5342 5343	HEXANE HEXANE	456 456		1.27		C20H23CL106 C20H23CL106	4'-BUT DXY-7-CL-4,6-DIMEO-6'-MEGRIS-3'-EN-3,2'DIONE
5344 5345	OCTANOL CYCLOHEXANE	483 141	44	4.92 4.22	4.92 =	C20H23N1 C20H23N1O4	AMITRIPTYLINE A-CARBETHOXY-B-ANILINO-B-PHENYLPROPIONIC ACID, ET. EST.
5346	DILS	505	23	3.40		C20H24CL1N301	ACRIDINE, 2-CL-7-MED-5(2-DIETAMINO-2-ETAMINO) PROCHLORPERAZINE
5347 5348	CHCL 3	482 486	68	~ C.73	-0.05 N 2.28 N	C20H24CL1N3S1 C20H24CL2N2SI	2-CL-10-(2(2-N-MEPIPERIDYL)ETHYL)PHENOTHIAZINE HCL
5349 5350	CHCL 3 OCTANOL	482 186	68	1.44	1.95 N 1.73 =	C20H24N2O1S1 C2CH24N2O2	PROPIOMAZINE QUININE
5351	TOTANOL	218		1.83	1.83 =	C20H24N2G2	QU ININE QU ININE
5352 5353	DIETHYL ETHER BENZENE	405	17 31	1.64	1.65 A 1.38 B	C2CH24N2C2 C2CH24N2C2	QUININE
5354 5355	DI-I-PR. ETHER N-HEPTANE	488 416	14	-1.60 1.98		C20H24N2O2 C20H24N2C6	QUININE B[S(P-AMIN:)SALICYLIC ACID) HEXYL ESTER
5356 5357	CHCL 3 CYCLOHEXANE	482 495	6.8	1.67	2.17 N	C20H24N2\$1 C20H24N4DZ	SANDOZ#6457 BENZIMICAZOLF, 1-DIETHYLAMINOETHYL, 5-NITRO, 2-BENZYL
5358	CYCLOHEXANE	495		2.06		C20H24N4O2	BENZIMI DAZOLE, 1-DIETHYLAMI NOETHYL, 6-NI TRO, 2-BENZYL
5359 536^	DIETHYL ETHER DIFTHYL ETHER	143	62 62	4.97 6.70	4.49 A 5.98 A	C20H24O3 C20H24O3	2-HYDROXYNAPHTHOQUINONE,3-(W-CARBOMETHOXYOCTYL) 2-HYDROXYNAPHTHOQUINONE,3-(W-CYCLOHEXYLBUTYL)
5361 5362	OIFTHYL ETHER CHCL3	465 486	62 46	4.27 -0.40	3.87 A	C20H24O4 C20H25CL2N3S1	2-HYDROXYNAPHTHOQUINONE,3-(DECYL-7-ONE) PROCHLORPERAZINE HYDROCHLORIDE
5363	OILS	505	23	2.61		C20H25N3	ACRIDINE,5-(DIETHYLAMINOPROPYLAMINO)
5364 5365	CHCL3 DIFTHYL ETHER	482 143	68 62	7.29	-0.53 N 6.50 A	C2CH25N3S1 C2CH26O3	PERAZINE 2-HYDROXYNAPHTHOQUINONE, 3-DECYL
5366 5367	DIETHYL ETHER DIETHYL ETHER	143	62 62	7.13 2.67	6.36 A 2.46 A	C20H26H3 C20H26H5	2-HYDROXYNAPHTHOQUINONE, 3-I-DECYL 2-HYDROXYNAPHTHOQUINONE, 3-(9,10-DIHYDROXYDECYL)
5368	N-FEPTANE	477		-3.49	2,40 A	C20H28N2O3	OXYPHENCYL AMINE
5369 5370	CHCL3 OLEYE ALCOHOL	491 142	46	1.45	2.00	C2CH29BR1N103 C2CH29N102	ATROPINE-N-PROPYLBROMIDE 2-METHOXY-4-ALLYLPHENOXYACETAMIDE,N-ALLYL-N-MEBUTYL
5371 5372	OLEYL ALCOHOL	142 218		1.80	2.35 4.40 =	C20H29N102 C20H29N302	2-METHOXY-4-ALLYLPHENOXYACETAMIDE.N.N-DIBUTYL DIBUCAINE/PERCAINE/
5373	CTANGL	216	34	4.18	4.18 =	C20H29N3D2	DI BUCAINE/PERCAINE/ DI BUCAINE/PERCAINE/
5374 5375	DILS DEEYL ALCOPOL	462 489	27	3.50 3.70	3.40 B 4.23	C20H29N3C2 C20H29N3C2	DI BUCAINE/PERCAINE/
5376 5377	OCTANOL '	216 216	79 56	2.18	2.18 = 1.97 =		DIBUCAINE ACETATE DIBUCAINE PHTHALATE
5378	CHCL 3	464	46	3.48		C2CH3CBR1N1Q4\$1	N-METHYL-6-RROWDOUINDLINIUM DECYLSULFATE N-METHYL-6-CHLDROQUINDLINIUM DECYLSULFATE
5379 5380	CHCL3	464 464	46 46	3.30 3.79		C20H30CE1N104S1 C20H30I1N104S1	N-METHYL-2-1000QUINDLINIUM DECYLSULFATE
5381 5382	N-HEPTANE N-FEPTANE	498 477		0.72 3.02		C2CH3CQ2 C2^H31N1C1	TESTOSTERONE, 17-4-4ETHYL TRIHEXYLPHENFOYL
5383	PLEYL ALCOHOL	142		2.09	2.64	C2CH31N1O3	2-METHOXY-4-ALLYLPHENOXYACETAMIDE,N,N-DI-I-BUTYL 1,2-DIMETHYLQUINOLINIUM NONYLSULFATE
5384 5385	CHCL3	464 464	46 46	2.98 3.05		C20H31N104S1 C20H31N104S1	1,4-DIMETHYLQUINOL INIUM NONYLSULFATE
5386 5387	CHCL3 CHCL3	464 503	46 46	3.13 3.37		C20H31N1D4S1 C20H31N1O4S1	1.6-DIMETHYLOUINOLINIUM NONYLSULFATE 1.8-DIMETHYLOUINOLINIUM NONYLSULFATE
5388 5389	CHCL3	503 464	46	3.29		C2CH31N1C4S1 C2CH31N1C4S1	N-METHYL-I-QUINOLINIUM DECYLSULFATE N-METHYLQUINOLINIUM DECYLSULFATE
5390	9C T ANDL	503	46	3.45	3.95 =	C2CH31N1C4S1	1, 2, 6-TRIMETHYLOUINOLINIUM OCTYLSULFATE
5391 5392	CHCL3	464 464	46 46	3.02 3.56		C20H31N105S1 C2CH31N105S1	N-ME-6-METHOXYQUINOLINIUM NONYLSULFATE N-ME-8-OH-QUINOLINIUM DECYLSULFATE
5393 5394	CHCL3	464 503	46 46	3.31		C2^H31N1C5S1 C2CH32N2C4S1	N-ME-8-METHOXYQUINOLINIUM NONYLSULFATE 1-METHYL-3-AMINOQUINOLINIUM DECYLSULFATE
5395	JGMA TUB-2 32	84 159	19	-1.51	-2.62	C20H32N6012S2 C20H32N8	GLUTATHIONE DISULPHIDE 4-ANDROSTENE-3,17-0 IONE-19-DEMETHYL
5396 5357	1CTANDL	438		2.73	-r.1c 2.73 =	C20H32 06	GLUCOPYRANDSIDE, 3, 5-DI(T-BUTYL)PHENYL (BETA)
5358 5359	CTANE CHCL 3	57 464	46	3.14 3.19		C2CH34D3 C2CH35N1D6\$1	P-T-OCTYLPHENOXYDIETHOXYETHANDL/OPE-2/ N-ME-3-MUTDXYCARBONYLPYRIDINIUM NONYLSULFATE
5400	FJOHO	404	46	3.60		C20H35N1C6S1	N-ME-3-ETHOXYCARBONYLPYRIDINIUM UNDECYLSULFATE

NC.	SOLVENT	REF	FOOT NOTE	LOGP SOLV	LOGP OCT	EMPIRICAL FORMULA	NAME
5401	CHCL 3	464		3.72		C2CH35N106\$1	N-ME-3-METHOXYCARBONYLPYRIDINIUM DODECYLSULFATE PIPERIDINE:1-DECYL,3-(N-PYROLIDINO-FORMYL)
5402 5403	BENZENE BENZENE	478 478		-C.31 -C.72	0.33 8	C20H38N2C1	PIPERICINE, 1-DECYL, 3-(N-MORPHOLING-FORMYL)
5404 5405	BENZENE BENZENE	478 478		-C.77	0.01 B	C20H40N2O1	PIPERIDINE, I-DECYL, 4-(N,N-DIETHYLCARBAMYL) 81 PIPERIDINE, I-DECYL, 3-(N,N-DIETHYLCARBAMYL)
5406	CHCL 3	455	i	8.60		C21H18N4S1 C21H18O4	THIOCARBAZONE, DI-A-NAPTHYL 2-HYDROXYNAPHTHOQUINONE, 3-(5-PHENYLPENTYL-5-ONE)
5467 5408	DIFTHYL ETHER PARAFFINS	465	1	3.90 2.76	3.54 A	C21H20N2O1	P-ETHOXY-N-(4-DIPHENYL)-BENZAMIDINE
54C9 5410	PARAFFINS PARAFFINS	499		2.15 2.98		C21H20N2C1 C21H20N2C2	P-PHENYL-N-(P-ETHOXYPHENYL)-BENZAMIDINE 3,4-DIMETHOXY-N-(4-DIPHENYL)-BENZAMIDINE
5411	OCTANOL	276 504	1	5.06	5.06 = -0.60 =	C21H20U3S1 C21H21CL1N2U8	1-(2-1-PROPYLPHENYLTHIOME)-3-CARBOXY-B-NAPHTHOL DEMETHYLCHLORTETRACYCLINE
5412 5413	OCTANOL [-BUTANOL	130	12	-0.66	-1.43	C21H21CL1N2O8	DEMETHYLCHLORTETRACYCL INF
5414 5415	OCTANOL DIETHYL ETHER	218		1.93 C.34	1.93 = 1.16 8	C21H22N2O2 C21H22N2C2	STRYCHNINE STRYCHNINE
5416 5417	CHCL3 DI-I-PR. ETHER	506 488		1.78	1.28 8	C21H22N2O2 C21H22N2O2	STRYCHNINE STRYCHNINE
5418	OCTANOL	504	40	-0.08	-0.08 ×	C21H22N2O7	6-DEMETHYL-G-DEDXYTETRACYCLINE
5419 5420	CHCL3	482 482		2.20 3.18	2.66 N 3.58 N	C21H23F3N2S1 C21H23F3N2S1	\$ANDOZ#10-768 \$ANDOZ#10-768
5421 5422	OCTANOL ETHYL OLEATE	218 494		1.03	1.03 =	C21H23N1O2 C21H23N1O5	COLCHICEINE HEROIN /DIACETYL MORPHINE/
5423	CHCL 3	482	68	0.52 3.49	1.09 N 3.86 N	C21H23N3D1S1 C21H23N3D1S1	PROPERICIAZINE PROPERICIAZINE
5424 5425	CHCL 3	482	68	-0.43	0.20 N	C21H24F3N3S1	TRIFLUOPERAZINE
5426 5427	DODECANE OCTANDL	475 469		4.11 1.84	1.84 =	C21 H24 F3 N3S 1 C21 H24 N2O4	TRIFLUOPERAZINE QUINAZOLIN-2-ONE, 1-METHYL-4-PHENYL+6-TRIETHOXY
5428 5429	OCTANOL CHCL3	475 486	46	1.69	1.69 = C.45 N	C21H25CL1F3N3S1 C21H25CL1F3N3S1	TRIFLUOPERAZINE HYDROCHLORIDE TRIFLUOPERAZINE HYDROCHLORIDE
5430	N-HEPTANE	477	•	C.38	U++5 II	C21H25N1O1	BENZTROPINE
5431 5432	OILS CHCL3	505 482		2.37 -1.40	-0.70 N	C21H26CL1N3O1 C21H26CL1N3O1S1	ACRIDINE, 2-CL-7-MEO-51 2-DIETAMINO-3-PR-AMINO) PERPHENAZINE
5433 5434	CHCL 3	482 482		1.50 C.50	2.01 N 1.07 N	C21H26N2O1S1 C21H26N2O1S2	SANDOZ#KS33 MESORIDAZINE
5435	CHCL3	482	69	2.57	3.00 N	C21H26N2O1S2 C21H26N2O6	MESORIDAZINE BIS(P-AMINOSALICYLIC ACID) HEPTYL ESTER
5436 5437	N-PEPTANE CHCL 3	482	68	2.19 2.04	2.51 N	C21H26N2S2	THIORIDAZINE
5438 5439	DIETHYL ETFER I-BUTANOL	143		7.14 2.00	6.38 A 2.30	C21H26D3 C21H26D5	2-HYDROXYNAPHTHOQUINONE, 3-(W-CYCLOHEXYLPENTYL) PREDNISONE
5440 5441	OCTANOL CHCL 3	227	,	1.46	1.46 =	C21H26O5 C21H27CL1N252	PREDNISONE (NCS 10023E) THIORIDAZINE HYDROCHLORIDE
5442	DIETHYL ETHER	502		0.29	1.62 \$	CZ1H27F105	6-A-FLUCRO-PRECNISCLONE
5443 5444	DIETHYL ETHER ETHYL OLEATE	502 494		-0.12 1.53	1.21 S	C21H27F1E6 C21H27N1C1	TRIAMCINOLÜNE METHADONE
5445 5446	CYCLOHFXANE CHCL 3	495 482		1.30 -C.25	0.37 N	C21 H2 7N3 U1 C21 H2 7N3 S2	BENZIMIDAZOLE, 1(2-DIME-AMINO,2-ME)ET,2-P-ETO-8ENZYL SANDGZ#7834
5447	CHCL 3	482	69	2.43	2.87 N -0.69 N	C21H27N3S2	SANDOZ#7834 NOR-PURDMYCIN (TYROSINE DERIVATIVE)
5448 5449	CHCL 3 N-HEPTANE	322 136	44	1.09	-0.07 4	C21H28N2O3	HIRSUTINE/PSEUDO CONFIG./
5450 5451	N-HEPTANE PRIM. PENTANOLS	136		r.78 -c.7∩		C21H28N2O3 C21H28N7C17P3	ISOCORYMANTHEIDINE/EPIALLO CONFIG./
5452 5453	HEXANOL DIETHYL ETHER	181	18	-0.70 7.69	6.86 A	C21H28N7G17P3 C21H28G3	NA DP 2-HYDROXYNAPHTHOQUINONE, 3-I-UNDECYL
5454	DIETHYL ETHER	143	62	4.36	3.94 A	CZ1H28O4	Z-HYDROXYMAPHTHUQUINONE.3-(W-OIMETHYL-W-OH-OCTYL)
5455 5456	HEXANE Diethyl ether	5 C 7		-1.52	1.37 5	C21H28O4 C21H28O5	4-PREGNENE-21-OL, 3, 11, 20-TRIONE PREONISOLONE
5457 5458	DIETHYL ETHER DCTANOL	508 227		0.00 1.42	C.84 B	C21H2815 C21H2835	PREDNISOLONE PREDNISOLONE (NCS 9120E)
5459	DIFTHYL ETHER	218	ŀ	1.47	1.47 =	C21 H28 U5 C21 H28 U5	4-PREGNENE, 17-4, 21-DIOL, 3, 11, 20-TRIONE/CORTISONE/ 4-PREGNENE, 17-4, 21-DIOL, 3, 11, 20-TRIONE/CORTISONE/
5460 5461	BENZENE	507	,	-0.04	1.33 A	C21H2BD5	4-PREGNENE, 17-A, 21-DIOL, 3, 11, 20-TRIONE/CORTISONE/
5462 5463	I-BUTANOL DIETHYL ETFER	130 502		1.87	2.02 1.68 S	C21 H2905 C21 H29F105	4-PREGNENE, 17-4, 21-DIDL, 3, 11, 20-TRIONE/CORTISONE/ 9-A-FLUDRO-HYDROCORTISONE
5464 5465	OIFTHYL ETHER N-PEPTANE	5 C 8		0.36 2.79	1.15 8	C21H29F105 C21H29N101	9-4-FLUOROHYDROCORTISONE DIMETHYLAMINOETHYL-2-T-BUTYLBENZHYDRYL ETHER
5466	OCTANOL	261		3.97		C21H30O2	PROGESTERONE
5467 5468	OIETHYL ETHER I-BUTANOL	502 130	12	2.78 2.40	4.01 S 2.86	C21H30O2 C21H3OO2	PROGESTERONE PROGESTERONE
5469 5470	DIETHYL ETTER OCTANOL	502 261		1.72 2.88	2.99 S 2.88 =	C21 H3003 C21 H3003	DESUXY CORTICOSTERONE 4-PREGNENE-21-OL, 3, 20-DIONE/DEDXYCORTICOSTERONE/
5471	N-PEPTANE	498 507	1	0.56 0.39		C21 H30O3 C21 H30O3	4-PREGNENE-21-DL, 3, 20-DIONE/DEOXYCORTICOSTERONE/ 4-PREGNENE-21-DL, 3, 20-DIONE/DEOXYCORTICOSTERONE/
5472 5473	HEXANE N-FFPTANE	498	l	-1.18		C21H32O3	PROGESTERONE, 11-A-HYDROXY
5474 5475		498 498	I	0.18 -0.54		C21H30O3 C21H3OO3	PROGESTERUNE, 17-A-HYDROXY PROGESTERONE, 11-B-HYDROXY
5476 5477	OCTANOL DIETHYL ETHER	261 502		2.46	2.46 = 1.97 S	C21H30U4 C21H30U4	11+DESOXY-17-HYDROXYCORTICOSTERONE 4-PREGNENE+11-B,21-DIOL-3,20-DIONE/CORTICOSTERONE/
5478	BENZENE	507	,	1.00	2.37 A	C21H3004	4-PREGNENE, 11-B, 21-010L, 3, 20-DICNE/CORTICOSTERONE/ HYDROCORTISONE
5479 5480	DIETHYL ETHER	502 508	3	0.11	1.53 S 0.96 B	C21H30O5	HY DROCORTISONE
5481 5482	BENZENE I-BUTANNL	507		-0.49 1.74	0.89 A 1.93	C21H30O5 C21H30O5	HYDROCORTISONE HYDROCORTISONE
5483 5484	CHCL 3 CYCLOHEXANE	491 446		-1.54 4.14		C21H31BR1N1O3 C21H31N1C1	AT ROPINE-N-BUTYROBROMIDE N-CYCLOUGOECYLCINNAMAMIDE
5485	DCTANOL	509	31	4.32	4.32 =	C21H31N1C3	3(N, N-DIMEAMME-2-NORBORNANYL)4-BUOXYBENZOATE/END/ 3(N, N-DIMEAMME-2-NORBORNANYL)4-BUOXYBENZOATE/EXO/
5486 5487	OCTANOL OLEYL ALCOHOL	509 489	28	4.35	4.35 = 4.98	C21H31N1O3 C21H31N3O2	CINCHONINAMIDE, N-(2-DIETHYL+AMINDE THYL)-2-PENTOXY
5488 5489	CHCL 3	464		3.99 3.78		C21H3ZBR1N1O451 C21H3ZCL1N1O451	N-METHYL-6-8R-QUNINGLINIUM UNDECYLSULFATE N-METHYL-6-CL-QUNINGLINIUM UNDECYLSULFATE
5490 5491	CHCL3 CYCLDHEXANE	464	46	4.21 3.45		C21 H32 I 1N1 D45 1 C21 H33N1C1	N-ME-Z-TODOQUINOLINIUM UNDECYLSULFATE N-CODECYLCINNAMAMIDE
5492	CHCL3	464	46	7.49		C21H33N10451	1,2-DIMETHYLQUINOLINIUM DECYLSULFATE 1,4-DIMETHYLQUINOLINIUM DECYLSULFATE
5493 5494	CHCL3	464	46	3.49		C21H33N1O4S1 C21H33N1O4S1	1.6-DIMETHYLOUINOLINIUM DECYLSULFATE
5496	CHCL3	503 503	46	3.84 3.72		C21H33N1O4S1 C21H33N1O4S1	1,8-DIMETHYLQUINOLINIUM DECYLSULFATE N-METHYL-I-QUINOLINIUM UNDECYLSULFATE
5497	CHCL3 OCTANOL	464 503		3.78 4.50	4.50 =	C21H33N1O4S1 C21H33N1C4S1	N-METHYLQUINOLINIUM UNDECYLSULFATE  1, 2,6-TRIMETHYLQUINOLINIUM NONYLSULFATE
5499	CHCL 3	464	46	3.79		C21H33N1C4S1 C21H33N1C5S1	1, 2, 6-TRIMETHYLOUINGLINIUM NONYLSULFATE N-ME-6-METHOXYQUINGLINIUM DECYLSULFATE
5500	CHCL 3	464	46	3.56		051 (133/417.32)	HOLEN CHETHING WOLDING IN LOS DECTE SOFT WIE

NC.	SOLVENT	<b>₹</b> 66	FOOT NOTE	L NGP SCLV	LOGP OCT	CMPIRICAL FORMULA	NAME
					<b>5.7</b> ·		N. ME. O. METHONYOMATHON TRATEM DECVI CHE EATE
5501 5502	CHCL3	464 464	46 46	3.32 4.04		C21H33N1O5S1 C21H33N1O5S1	N-ME-8-METHOXYQUINOLINIUM DECYLSULFATE N-ME-8-7H-QUINOLINIUM UNDECYLSULFATE
5503	CHCL 3	503		3.59		C21H34N2C4S1	1-METHYL-3-AMINDQUINDLINIUM UNDECYLSULFATE
5504	N-PUT ANOL	159		(.99	C . 86	C21H34N8	4-ANDROSTENE-3+17-DIONE N-ME-3-BUTDXYCARBONYLPYRIDINIUM DECYLSULFATE
5505 5506	CHCL3	464	46 46	3.56 3.96		C21H37N1O6S1 C21H37N1O6S1	N-ME-3-ETHOXYCARBONYLPYRIDINIUM DODECYLSULFATE
5507	DOTANOL	65		1.83	1.83 =	C21H3B3R1N1	HEXADECYLPYRIDINIUM BROMIDE
5508	OCT ANOL	65	46	1.71	1.71 =	C21H38CL1N1 C21H39CL1N1O1	HEXADECYLPYRIDINIUM CHLORIDE HEXADECYLPYRIDONIUM CHLORIDE
5509 5510	NITEORENZENE CHCL3	63 464	46	0,55 3,23	1.34	C21H38N2D551	N-ME-3-FORMAMIDOPYRIDINIUM TETRADECYLSULFATE
5511	CHCL 3	464	46	3.95		C21H39N104\$1	1,2-DIMETHYLPYRIDINIUM TETRADECYLSULFATE
5512	N-RUTANOL	510 478		0.04 0.26	-r.45 c.73 B	(21H39N7U12 C21H40N2C1	STREPTOMYCIN (AS TRI-P-TOLUENESULFONATE) PIPERIDINE, 1-DECYL, 3-(N-PIPERIDINO-FORMYL)
5513 5514	AFNZENF OCTANDL	141		3.38	3.38 =	C22H15N104S1	1.4-NAPHTHOQUINONE, 2-ANILIND-3-PHENYLSULFONYL
5515	CYCLOHEXANE	141		2.45		C22H15N104S1	1,4-NAPHTHOQUINONE, 2-ANILINO, 3-PHENYL SULFONYL
5516 5517	CYCLOHEXANE	374 226	48	2.39 2.06	2.06 =	C22H18N2O2 C22H21N1U2S1	MALON-CIANILIDE, BENZAL 3-TRITYLTHIO-L-ALANINE/NSC-83265/
5518	DOTANOL	504	40	-0.04	-0.04 =	C22H22N2O8	METHACYCLINE
5519	OCTANOL	504	40	-0.30	-0.39 =		CHLURT ETRACYCL INE
5520 5521	I-BUTANOL TCTANTL	13C	12 40	-0.43 -0.02	-1.11 -C.02 =	C22H23CL1N2O8 C22H24N2C8	CHLORTETRACYCL INE DOXYCYCL INE
5522	OCTANOL	218		-1.47	-1.47 =		TFTRACYCLINE
5523	CTANDL	504	40	-1.25	-1.25 =	C22H24N2O8	TETRACYCLINE
5524 5525	I-BUTANOL DOTANOL	130 504	40	-1.00	-1.91 -1.12 =	C22H24N2Q8 C22H24N2O9	TETRACYCLINE OXYTETRACYCLINE
5526	N-HEPTANE	477	4.5	-0.74		C22H25N1O3	TROPINE BENZILATE
5527	CHCL3	482		-1.30	-0.61 N	C22H26F3N3O1S1	FLUPHENAZINE
5528 5529	CHCL3 DIETHYL ETHER	482 143	69 62	2.30 7.42	2.75 N 6.63 A	C22H26F3N3O1\$1 C22H26O3	FLUPHENAZINE 2-HYDROXYNAPHTHOQUINONE, 3-TR-4-CYCLOHEXYLCYCLOHEXYL
5530	CHCL3	486		-1.00	-0.32 N	C22H27CL1F3N3O1S1	FLUPHENAZINE HYDROCHLORIDE
5531	HFXANE	456		2.81		C22H27CL106	7-CL-4'-HEXOXY-4,6-DIMEO-6'-MEGRIS-3'-EN-3,2'DIONE ACRIDINE,2-CL-7-MEO-5(2-DIETAMINO-4-BU-AMINO)
5532 5533	DIETHYL ETHER	505 502	23	2.39 0.87	2.16 S	C22H29CL1N3O1 C22H28F2O5	6-A-FLUORD-DEXAMETHASONE
5534	N-FEPTANE	136	44	1.54	2112	C22H28N2U3	CORYNANTHEIDINE/ALLO CONFIG./
5535	N-HEPTANE	136		1.20		C22H28N2O3 C22H28N2C6	DIHYDRUCORYNANTHEINE/NORMAL CONFIG./ BIS(P-AMINOSALICYLIC ACID) OCTYL ESTER
55 36 55 37	N++EPTANE CHCL 3	416 482		2.26 7.29	2.74 N	C22H28N2S2	SANDOZ#TT418
5538	CYCLOHEXANE	495		1.99		C22H28N4Q3	BENZIMIDAZOLE, 1-DIET-AMINOET-2-(P-ETO-BENZYL)-5-NO2
5539	DIETHYL ETHER	572		1.51		C22H29F104	6-A-METHYL-9-A-FLUORO-21-DESOXYPREDNISOLONE BETAMETHASONE
5540 5541	DIFTHYL ETHER	502 502		C.68		C22H29F105	DEXAMETHASONE
5542	DIETHYL ETHER	508		C • 82	1.59 B	C22H29F1C5	DEXAMETHASONE
5543	DIETHYL ETHER	502		0.62 4.18	1.93 S 4.18 =	C22H29F105 C22H29N102	6-A-METHYL-9-A-FLUORO-PREDNISOLONE PROPOXYPHENE
5544 5545	OCTANOL N-HEPTANE	235 421		3.65	7.10 -	C22H29N102	PROPOXYPHENE
5546	BENZENE	511		-r.36		C22H29N1U7	RHODOMYCIN THIETHYL PERAZINE
5547 5548	CHCL 3 CHCL 3	482 482		2.07	C.62 N 2.54 N	C22H29N3\$2 C22H29N3\$2	THIETHYLPERAZINE
5549	CHCL3	322		0.89	1.36 %	C22H29N705	PURCMYCIN
5550	SIETHYL ETHER	143		8.24	7.34 A 1.85 S	C22H30O3 C22H30O5	2-HYDROXYNAPHTHOOUINONE, 3-DODECYL 6-A-METHYL-PREDNISOLONE
5551 5552	DIETHYL ETHER	508		C.54	1.20 8	C22H30O5	MFTHYL PREDAL SOLONE
5553	DIETHYL ETHER	502		2.44	3.68 S	C22H31F103	9-A-FL-11-8-OH-6-A-ME-4-PREGNENE-3-20-DIONE
5554 5555	OTETHYL ETHER CHCL3	502 491		1.71	2.98 5	C22H31F104 C22H33AR1N103	6-A-METHYL-9-A-FLUDRO-DESOXYHYDRUCORTISONE ATROPINE-N-AMYLBROMIDE
5556	JI FYL ALCOHOL	489		5.13	5.70	C22H33N3O2	CINCHON INAMIDE, N-(2-DIETHYL-AMINOETHYL)-2-HEXOXY
5557	CHCL3	464		4.40		C22H34BR1N1O4S1 C22H34CL1N1C4S1	N-METHYL-6-BR-QUINDLINIUM DODEYLSULFATE N-METHYL-6-CL-QUINDLINIUM DODEYLSULFATE
5558 5559	CHCL3	464		4,65		C27H34I1N1O4S1	N-ME-2-1000QUINDLINIUM DODECYLSULFATE
5560	CHCL 3	464		3,93		C22H35N1C451	1,2-DIMETHYLQUINOLINIUM UNDFCYLSULFATE 1,4-DIMETHYLQUINOLINIUM UNDFCYLSULFATE
5561 5562	CHCL 3 CHCL 3	464 464		3.95 4.06		C22H35N1O4S1 C22H35N1O4S1	1,6-DIMETHYLQUINDLINIUM UNDECYLSULFATE
5563	CHCI 3	503		4.29		C22H35N1C4S1	L. 8-DIMETHYLQUINOLINIUM UNDECYLSULFATE
5564	CHCL3	503		4.15		C22H35N1C4S1	N-METHYL-I-QUINOLINIUM DODECYLSULFATE N-METHYLQUINOLINIUM DODECYLSULFATE
5565 5566	CHCL3 CCT4NOL	464 503		4.20 5.05	5.05 =	C22H35N1C4S1 C22H35N1C4S1	1.2.6-TRIMETHYLQUINOLINIUM DECYLSULFATE
5567	CHCL 3	464	46	4.20		C22H35N1O4\$1	L. 2. 6-TRIMETHYLQUINOLINIUM DECYLSULFATE
	CHCL 3	464		3.98 4.29		C22H35N1O5S1 C22H35N1O5S1	N-ME-6-METHOXYQUINOLINIUM UNDECYLSULFATE N-ME-8-METHOXYQUINOLINIUM UNDECYLSULFATE
	CHCL 3 CHCL 3	464 464		4.50		C22H35N1O5S1	N-ME-8-OH-QUNINGLINIUM DODECYLSULFATE
5571	CHCL 3	503	46	4.33		C22H36N2O4S1	1-METHYL-3-AMINOQUINOL IN IUM DODECYLSULFATE
5572 5573	DCTANE CHCL3	57 464		2.50 3.91		C22H38O5 C22H39N1O6\$1	P-T-OCTYLPHENOXYTRIETHOXYETHANOL/OPE-3/ N-ME-3-BUTOXYCARBONYLPYRIDINIUM UNDECYLSULFATE
5574	CHCL3	464		4.30		C22H39N106\$1	N-ME-3-METHOXYCARBONYLPYRIDINIUM TETRADECYLSULF
5575	CHCL 3	464	46	4.46	0 77 7	C22H41N10451	1, 2, 5-TRIMETHYLPYRIDINIUM TETRADECYLSULFATE PIPERIDINE, 1-DECYL, 3-(N,N,-DIPROPYLCARBAMYL)
5576 5577	BENZENE CYCLOHEXANE	478		4.00	C.73 B	C22H44N2O1 C23H18N2O2	1, 4-NAPHTHOQUINONE, 2-ANILINO, 3-P-TOLUIDINO
5578	DOTANOL	50		2.30	2.30 =	C23H20N2O3S1	SULFINPYRAZONE
5579	DIETHYL ETHER	143		5.77		C23H22O3	2-HYDROXYNAPHTHOQUINONE, 3-W-8-TETRALYL PROPYL MALACHITE GREEN
5580 5581	OCTANOL DIETHYL ETHER	268		C.62	0.62 = 0.19 H		BRUCINE
5582	N-8UTANUL	253	36	0.11	-r.36	C23H26N2O4	BRUCINE
5583 5584	I-RUTANOL DIETHYL ETHER	502		1.32 2.39	1.35 3.63 S	C23H26N2O4 C23H27CL1F2O6	BRUCINE 6,9-A-DIFLUORO+16-A-CL+PREDNISOLONE ACETATE
5585	DIETHYL ETHER	502		1.93	3.19 S	C23H27F3O6	6,9,16-A-TRIFLUDRO-PREDNISOLONE ACETATE
5586	OC TANOL	504		-0.04	-0.04 =	C23H27N3O7	9-DIMEAMIND-6-DEMETHYL-6-DEDXYTETRACYCLINE MINDCYCLINE
5587 5588	OCTANOL DIETHYL ETHER	504 502		0.05 1.66	C.05 = 2.92 S	C23H27N3O7 C23H28F2O6	6-4-16-4-DIFLUORD-PREDNISOLONE ACETATE
5589	DIFTHYL ETHER	143	62	7.37	6.59 A	C23H28O3	2-HYDROXYNAPHTHDQUINDNE+3-W-TR-B-DECALYLPROPYL
5590	CHCL3	486		0.67	1.20 N 2.86 S	C23H29CL2N3O2S1 C23H29F1O6	THIOPROPAZATE HYDROCHLORIDE 6-A-FLUORO-PREDNISOLONE ACETATE
5591 5592	DIFTHYL ETHER CHCL3	502 482		1.57		C23H29N3O2S1	AC ET OPHENAZINE
5593	CHCL3	482	69	1.71	2.20 N	C23H29N3C2S1	AC ETOPHENAZINE PROPANTHELINE BROMIDE
5594 5595	BENZENE DILS	4·05		-9.64 2.41		C23H308RIN103 C23H30CL1N301	ACRIDINE, Z-CL-7-MEO-5(2-DIETAMINO-5-AM-AMINO)
5596	DIETHYL ETHER	502	!	1.91	3.17 5	C23H30F2U5	6-A-9-A-DIFLUORO-21-DESOXY-HYDROCORTISONE ACETATE
5597 5598	CHCL3 N-FEPTANE	482		2.29	2.74 N	C23H30N2O1S1 C23H30N2O4	SANDOZ#KS75 MITRACILIATINE/PSUEDO CONFIG
5599	N-+ FPTANF	136	44	2.02		C23H30N2C4	MITRAGYNINE/ALLD CONFIG./
560^	N-+FPTANE	136	44	r.95		C23H30N2C4	SPECIOCILIATINE/EPIALLO CONFIG./

NC.	SOLVENT	REF F	OOT NOTE	LOGP SOLV	LUGP OCT	FMPIRICAL FURMULA	NAME
5601	N-HEPTANE	136	44	1.49		C23H30N2R4	SPECIOGYNINE/NORMAL CONFIG./
5602	N-HEPTANE	416	14	2.32		C23 H3 O N2 C6	BISTP-AMINOSALICYLIC ACIDI NONYL ESTER
5603	CHCL3	512	57	1.05	2.68 \$	C23H30N3C7 C23H30N6	XANTHOMYCIY CORTISONE ACETATE
5604 5605	DIETHYL ETHER	502 502		1.33		C23H3Q96	PREDNISOLONE ACETATE
5606	DIETHYL ETHER	508		1.11		C23H39D6	PREDNISOLONE ACETATE
56C7	DIETHYL ETHER	502		1.66	2.92 \$ 1.95 B	C23H31F106 -	9-A-FLUDRO-HYDROCORTISONE ACETATE 9-A-FLUDROHYDROCORTISONE ACETATE
5608 5609	DIETHYL ETFER OCTANOL	508 56		3.47	3,47 =	C23H31N102	A.A-DIPHENYLVALERIC ACID. DIETHYLAMINDETHYL ESTER
5610	DCTANDL	276		4.65		C23H31N1C2	SKF 5254 /PK4 = 8.89/
5611	CHCL 3	464	46	4.65 1.48		C23H31N1C4S1 C23H31N3O1	N-METHYLACRIDINIUM NONYLSULFATE RENZIMICAZOLE, 1(2-DIET-AMINO,2-MEIFT,Z-P-ETO-BENZYL
5612 5613	CYCLOHEXANE DIETHYL ETFER	495 502		1.42	2.70 S	C23H32D6	HYDROCORTISONE ACETATE
5614	DIETHYL ETHER	513		1.09	2.37 5	C23H32D6	HYDROCORTISONE ACETATE
5615	DIETHYL ETFER	508		1.11	1.85 B C.83	C23H32O6 C23H32O6	HYDROCORTISONE ACETATE G-STROPHANTHIDIN
5616 5617	I-BUTANOL CHCL3	130 405	46	C.95	( · 0 2	C23H33I1N2O1	IS OPROPAMIDE
5618	N-BUTANOL	159		0.70	0,46	C23H34N8C3	. PREDNISONED I GUANYL HYDRAZONE
5619	I-BUTANOL	130		1.95	2.20	C23H34O4 C23H358R1N1O3	DI GITOX IGENIN AT PUPINE-N-HEXYL BROMIDE
5620 5621	CHCL3 N-BUTANOL	491 159	46	-(.74 1.54	1.62	C23H36N8	D-1-PROGEST ERONED I GUAN YL HYDR AZ DNE
5622	N-BUTANOL	159		1.47	1.52	C23H36N8	D-6-PROGEST ERIDNED I GUAN YL HYDRAZ ONE
5623	N-BUTANOL	159		C.82	0.62	C23H36NBD1 C23H36NBD1	D-6-PROGESTERONE-14-OH/DIGUANYLHYDRAZONE/ PROGESTERONEDIGUANYLHYDRAZONE,11-ONE
5624 5625	N-BUTANOL N-BUTANOL	159 159		1.58	1.68	C23H36N8O2	D-1,6-PROGESTERONEDIGUANYLHYDRAZONE
5626	N-BUTANOL	159		0.38	0.61	C23H36N8D3	CORT IS ONE DIGUANYL HYDRA ZUNE
5627	N-BUTANOL	159		0.51	0.19 0.30	C23H36N8O3 C23H36N8O3	CORT IS ONED I GUANYL HYDRA ZONE PRED IS OLONED I GUANYL HYDRA ZONE
5628 5629	N-BUTANOL N-BUTANOL	159 159		0.59 0.99	0.86	C23H36N1CO2	PROJESTERONEDI GUANYL HYDRAZONE + 2 + 4-DI-NITRO SO
5630	N-RUTANOL	159		1.65	1.71	C23H37CL1N8	4-CHLOROPROGESTERONE/DIGUANYLHYDRAZONE/
5631	CHCL3	464	46	4.35		C23H37N1C4S1 C23H37N1C4S1	1,2-DIMETHYLQUINOLINIUM DODECYLSULFATE 1,6-DIMETHYLQUINOLINIUM DODECYLSULFATE
5632 5633	CHCL 3 CHCL 3	464 503	46 46	4.58 4.73		C23H37N1C4S1	1, 8-DIMETHYLQUINOLINIUM DODECYLSULFATE
5634	CHCL 3	464	46	4.42		C23H37N1C4S1	1,4-DIMETHYLQUNIOLINIUM DODECYLSULFATE
5635	OCTANOL CHCL 3	503 464	46 46	5.45 4.66	5.45 *	C23H37N1U4S1 C23H37N1U4S1	1,2,6-TRIMETHYLQUINDLINIUM UNDECYLSULFATE 1,2,6-TRIMETHYLQUINDLINIUM UNDECYLSULFATE
5636 5637	CHCL3 CHCL3	464	46	4.52		C23H37N105S1	N-ME-6-METHOXYQINOLINIUM DODECYLSULFATE
5638	CHCL 3	464	46	4.77		C23H37N1O5S1	N-ME-8- METHOXYQINGLINIUM DODEC YL SULFATE
5639	N-BUTANOL	159		1.52	1.59	C23H38N8 C23H38N8O1	PROGESTERONED I GUANYL HY OR A ZONE PROGESTERONED I GUANYL HY OR A ZONE , 11-OH
5640 5641	N-BUTANOL N-BUTANOL	159 159		0.93	0.78	C23H38N8fil	PROGESTERONEDIGUANYLHYDRAZONE,17-OH
5642	N-BUTANOL	159		1.12	1.04	C23H3&N801	PROGESTERONEDIGUANYLHYDRAZONE, 21-OH
5643 5644	N-BUTANOL N-BUTANOL	159 159		C.34 C.51	-0.04 0.19	C23H3BN8O2 C23H3BN8O2	PROGESTERONED I GUANYL HYDRAZONE, 7,14-DI-DH PROGESTERONED I GUANYL HYDRAZONE, 6,11-DI-DH
5645	N-BUTANOL	159		0.54	C.24	C23H39N8O2	PROGESTERONED I GUANYL HYDRAZONE , 11 , 17-D1-DH
5646	N-RUTANOL	159		C.75	0.29	C23H38NRO2 C23H39N8C2	PROGESTERONED I GUANYL HYDR AZONE , 16,17-DI - DH PROGESTERONED I GUANYL HYDR AZONE , 17,21-DI - DH
5647 5648	N-BUTANOL N-BUTANOL	159 159		0.31	-0.08	C23H38N8O3	HY DRUCORT I SONED I GUAN YL HYDR AZ ONE
5649	N-BUTANOL	159		1.11	1.03	C23H4-0N9	3, 20 - PREGNANED I ONED I GUAN YL HYDRAZONE, 5-H-CIS
5650 5651	N-BUTANOL N-BUTANOL	159 159		1.06	0.96 C.52	C23H40N8 C23H40N8C1	3,20-PREGNANEDIONEDIGUANYLHYDRAZONE,5-H-TRANS PREGNANE-3,20-D10NE-12-DH/DIGUANYLHYDRAZONE/
5652	CHCL 3	464	46	4.27		C23H41N106S1	N-ME-3-BUTOXYCARBONYLPYRIDINIUM DODECYLSULFATE
5653	CHCL 3	464	46	4.60	2 72 -	C23H41N1C6S1	N-ME-3-ETHOXYCAPRONYLPYRIDINIUM IF TRADECYL SULFA OCTADECYLPYRIDINIUM BROMIDE
5654 5655	OCTANOL N-BUTANOL	65 514	46	2.72 C.61	2.72 = 0.35	C23H42BR1N1 C23H46H6C13	NECHYCIN-B (AS 2-ETHYL BUTYRATE)
5656	CHCL 3	95	46	0.68		CZ4H2OAS1BR1	TETRAPHENYLARSONIUM BROMICE
5657 5658	CHCL3	95 95	46 46	-0.74 -0.74		C24H20AS1CL1 C24H20AS1N102	TETRAPHENYLARSONIUM CHLORIDE TETRAPHENYLARSONIUM VITRITE
5659	CHCL3	95	46	1.88		C24H20AS1N103	TETRAPHENYLARSONIUM NITRATE
5660	CHCL 3	97	46	0.50		C24H23BR1P1	TETRAPHENYLPHOSPHONIUM BROMIDE
5661 5662	CHCL3 CHCL3	97 97	46 46	-C.33		C24H20BR134P1 C24H20CL1P1	TETRAPHENYLPHOSPHONIUM BROMATE TETRAPHENYLPHOSPHONIUM CHLORIDE
5663	CHCL3	97	46	1.85		C24H20I1P1	TETRAPHENYLPHOSPHONIUM ICOIDE
5664	CHCL3	97	46	-€.96		C24H2?N1D2P1	TETRAPHENYLPHOSPHONIUM NITRITE TETRAPHENYLPHOSPHONIUM NITRATE
5665 5666	CHCL3 CHCL3	97 95	46 46	°.67 -1.30		C24H20N1O3P1 C24H21AS1U3S1	TETRAPHENYLARSONIUM SULFITE
5667	CHCL3	95	46	-1.79		C24H21AS1O3S2	TETRAPHENYLARSONIUM THIOSULFATE
5668	CHCL 3	95	46	-0.23		C24H22AS1CR1()4 C24H22AS1CR1O4	TETRAPHENYLARSONIUM CHROMATE TETRAPHENYLARSONIUM CHROMATE
5669 5670	CHCL3 CHCL3	95 95	46 46	1.09		C24H2ZAS1D4P1	TETRAPHENYLARSONIUM PHOSPHATE
5671	CHCL 3	97	46	-0.29		C24H22CR1O4P1	TETRAPHENYLPHOSPHONIUM CHROMATE
5672	CHCL 3	97	46	0.73		C24H22CR104P1 C24H22O4P2	TETRAPHENYLPHOSPHONIUM CHROMATE TETRAPHENYLPHOSPHONIUM PHOSPHATE
5673 5674	CHCL3 PARAFFINS	97 499	46	-1.60 2.10		C24H25N3	P-PHENYL-N-(P-PIPERIDINOPHENYL)-BENZAMIDINE
5675	CHCL3	497	46	6.77		C24H28N4U8	DEXTROMETHORPHAN PICRATE
5676		497 508	46	4.20 1.23	1.95 8	C24H28N4U8 C24H30F2C6	DEXTROMETHORPHAN PICRATE FLUOCINGLONE ACETONIDE
5677 5678		502		2.16	3.40 \$	C24H30F2O6	6-A-FLUORO-DEXAMETHASONE ACETATE
5679	DIETHYL ETHER	502		1.41	2.69 \$	C24H30F2D6	6-A-FLUORO-TRIAMCINOLONE ACETONIDE
5680	DIETHYL ETHER DIETHYL ETHER	502 502		1.97 1.92	3.23 S 3.18 S		6-A-METHYL-9-A-FLUORO-21-DEOXYPREDNISOLONE ACETATE 6-A-METHYL-9-A-FLUORO-PREONISOLONE ACETATE
5681 5682		502		1.16	2.44 S		TRIAMCINDLONE ACETONIDE
5683	DIETHYL ETHER	513		1.11	2.39 S		TRIAMCINOLONE ACETONIDE
5684 5685	DIETHYL ETHER CHCL3	508 482	68	-0.11	1.84 B	C24H31F1O6 C24H31N3C1S1	TRIAMCINOLONE ACETONIDE BUTAPERAZINE
5686	CHCL 3	482	69	1.32	1.84 N	C24H31N3O1S1	BUTAPERAZINE
5687	CHCL3	482	68	-0.89	-0.22 N	C24H31N3N2S1	CARPHENAZINE
5688 5689	CHCL3	482 505	69 23	1.39	2.37 N	C24H31N3O2S1 C24H32CL1N3O1	CARPHENAZINE ACRIDINE, Z-CL - 7-MED-5( Z-DIETAMINO-6-HEX-AMINO)
5690	N-PEPTANE	416	14	2.36		C24H32N2C6	BIS (P-AMINOSALICYLIC ACID) DECYL ESTER
5691	DIETHYL ETHER DIETHYL ETHER	502 513		1.83	3.09 S 2.11 S	C24H32O6 C24H32O6	6-4-METHYL-PREDNISDLONE ACETATE PREDNACINOLONE
5692 5693		508		1.09	1.81 8	C24H33F1C6	FLUANDRENOLONS ACETUNIDE
5694	CYCLOHEXANE	474	14	-2.30	_1 50 0	C24H34N8C4S2	THIAMINE DISULFIDE THIAMINE DISULFIDE
5695 5696	CHCL3 ETHYL ACETATE	474 474	14	-1.49 -1.03	-1.50 B -1.16	C24H34N8C4S2 C24H34N8C4S2	THIAMINE DISULFIDE
5697	CHCL 3	491	46	-0.30		C24H37BR1N1O3	ATROPINE N-HEPTYLBROMIDE PROGESTERONEDIGUANYLHYDRAZONE,16-CARBOXY
5698 5699	N-BUTANOL N-BUTANOL	159 159		1.00 0.33	0.87 -0.05	C24H37N8O2 C24H37N9	PROGESTERONED I GUANYL HYDRAZONE , 5 - CYAND
5700	N-BUTANOL	159		C.61	0.33	C24H37N9	PROGESTERONED I GUANYL HYDRAZONE, 12-C YAND

NO	COLVENT	REF F	EDOT	LOGP	LOGP	EMPIRICAL	NAME
NC.	SOLVENT		NOTE	SOLV	DCT	FORMULA	THE CONTRACTOR OF THE CONTRACT
					5.90 =	534 UZON104 \$1	1, 2, 6-TRIMETHYLQUINOLINIUM DODECYLSULFATE
5701 5702	OCTANOL CHCL3	503 464	46 46	5.90 5.13	D. 90 =	C24H39N1O4\$1 C24H39N1O4\$1	1, 2, 6-TRIMETHYLQUINOLINIUM DODECYLSULFATE
5703	OCTANE	57		2.03		C24H42B6	P-T-OCTYL PHENOXYTETRAETHOXYETHANOL/OPE-4/
5704 5705	CHCL3 DCTANOL	95 268	59	1.53	0.96 *	C25H20AS1N1S1 C25H30CL1N3	TETRAPHENYLARSONIUM THIOCYANATE GENTIAN VIOLET/CRYSTAL VIOLET/
5706	DIETHYL ETHER	502	29	1.54	2.81 S	C25H33F106	6-A-METHYL-TRIAMCINOLONE ACETONIDE
5707	DCTANOL	283	7	-1.37	-1.37 =	C25H33N1C4.HCL	ETORPHINE HYDROCHLURIDE  4CRIDINE, 2-CL-7-MED-5(2-DIETAMING-7-HEP-AMINO)
57C8 5709	OILS DIETHYL ETHER	505 502	23	2.18 2.40	3.64 S	C25H34CL1N3O1 C25H34O5	6-A-METHYL-21-DESOXY-PREDNISOLONE PROPIONATE
5710	DIETHYL ETHER	502		1.73	3.00 5	C25H35F1C6	6-A-METHYL-9-A-FLUORO-16-A-HYDROXYCORTISONE ACETONIDE
5711	CHCL3	464	46	5.45	2 4 2 5	C25H35N1П4S1	N-METHYL ACRIDINIUM UNDECYL SULFATE Hydrochrtisone-21-butyrate
5712 5713	DIETHYL ETHER	502 502		2.39	3.63 S 3.59 S	C25H36O6 C25H36O6	HYDROCORTISONE-21-BUTYRATE
5714	CHCL3	491	46	C.22		C25H39BR1N1U3	AT ROPINE-N-OCTYL BROW LDE
5715	CHCL 3	515	41	3.42		C25H41N1O7S1 C25H45N1O6S1	HOMATROPINE-NONYLSULFATE N-ME-3-BUTOXYCARBONYLPYRIDINIUM TETRADECYLSULF.
5716 5717	CHCL 3 CCTANDL	464 65	46	5.12 3.28	3.28 =	C25H46BRINI	BENZYLDIMETHYLHEXADECYLAMMONIUM BROMIDE
5718	TOLUENE	148		0.04	C.68 B	C26H22CD1N8D2	CADMIUM-CARBAZONE COMPLEX
5719 5720	TOLUENE TOLUENE	148 148		2.95 3.08	2.82 B 2.86 B	C26H22CU1N8O2 C26H22FE1N8O2	CUPRIC-CARBAZONE COMPLEX FERROUS-CARBAZONE COMPLEX
5721	TOLUFNE	148		-0,30	C.44 B	C26H22MN1N8O2	MANGANOUS-CARBAZONE COMPLEX
5727	TOLUFNE	148		1.18	1.49 B	C26H22N8D2P81 C26H22N8D2SN1	PLUMBOUS-CARBAZONE COMPLEX STANNOUS-CARBAZONE COMPLEX
5723 5724	TOLUENE TOLUENE	1 48 1 48		2.30	2.33 B	C26H22N8D2ZN1	ZINC-CARBAZONE COMPLEX
5725	TOLUENE	148		-0.10	C.58 S	C26H22NI1N8O2	NICKEL-CARBAZONE COMPLEX 6-A-FLUORO-DEXAMETHASONE-21-BUTYRATE
5726 5727	SIETHYL ETHER	502 502		3.18 3.24	4.39 S 4.45 S	C26H34F2O6 C26H34F2O6	AT A PELOURO DE XAMET AND SAME PELO BOTT NATE
5728	CHCL3	491	46	C.87		C26H41BR1N103	AT ROPINE-N-NONYL BROWIDE
5729	OCTANE	57		1.61		C26H46D7	P-T-OCTYLPHENOXYPENTAETHOXYETHANOL/OPE-5/
5730 5731	CHCL 3 BENZENE	516 516	64 64	1.08		C27H28BR205\$1 C27H28BR205\$1	BROMTHYMOLBLUE BROMTHYMOLBLUE
5732	TOLUENE	516	64	0.30		C27H28BR205S1	BROMTHYMOLALUE
5733	CCL4	516	64	0.10		C27H28BR205S1	BROMTHYMOL BLUE BROMTHYMUL BLUE
5734 5735	CLCH2CH2CL DIETHYL ETHER	516 502	64	0.91 2.93	4.15 S	C27H288R2C5S1 C27H35F1O7	6-A-ME-9-A-FL-PREDNISOLONE-16-17-ACETONIDE-21-ACETATE
5736	DIETHYL ETHER	502		2.71	3.94 S	C27H37F106	BETAMETHASONE-17-VALERATE
5737	DIETHYL ETHER	513	12	0.11	1.43 S 4.20 S	C27H37F1G6 C27H37F1C7	BETAMETHASONE-17-VALERATE 6-A-ME-9-A-FL-HYDROXYCOPTISONE-ACETONIDE-21-ACETATE
5738 5739	DIETHYL ETHER	502 502		2,98 3,56	4.75 \$	C27H4006	HY DROCORT I SONE-21-CAPROATE
5740	CHCL3	491	46	1.15		C27H43BR1N1O3	ATROPINE-N-DECYLBROMIDE 6-A-METHYL-TRIAMCINDLONE ACETONIDE-21-PROPIONATE
5741 5742	DIETHYL ETHER DIETHYL ETHER	502 502		3.23 3.14	4.44 5 4.35 S	C28H37F107 C28H39F107	6-4-ME-9-4-FL-HYDROXYCORTISONE-ACETONIDE-PROPIONATE
5743	MIXED SOLV#1	433		2.78		C28H48N203	BARBITURIC ACID, 1-N-OCTADECYL-5,5-DIALLYL
5744	OCTANE	57		1.23		C2 8 H5 1 OR C3 O H3 9 N4 O4	P-T-OCTYLPHENDXYHEXAETHOXYETHANOL/OPE-6/ DEUT ERG-PORPHYRIN
5745 5746	DIETHYL ETHER HEXANE	517 456	19	C.80		C30H33CL1015	GRISEOFULVIN, TETRA-ACETYL-2'-GLUCOSYLOXY
5747	CHCL3	515	41	4.27		C30H45N107S1	METHANTHEL INE-NONYL SUL FATE
5748	CHCL 3	515 57	41	4.66 (.74		C30H53N107S1 C30H54U9	P-T-DCTYLPHENOXYLEPTAETHOXYETHANOL/OPE+7/
5749 5750	GCTANE CHCL3	515	41	4.90		C30H55N105S1	TRIDIHEXYL-NONYL SUL FATE
5751	JOHANOL	65	46	-1.47	-1.47 =	C31H32BR2NGU1	NCS-113089 1.4-NAPHTHOQUINONE,2-METHYL,3-PHYTYL (VITAMIN K)
5752	CYCLOHEXANE CHCL 3	141 515	41	3.27 3.95		C31H46O2 C31H50N2O6\$1	BENZOMETHAMINE-NONYL SULFATE
5753 5754	CHCL3	515	41	5.60		C32H49N1Q7S1	PROPANTHEL INE-NONYL SUL FATE
5755	STATE STATES	3	17	2.45	2.26 4	C32H49N1C9 C32H49N1C9	CEVADINE CEVADINE
5756 5757	I = BUTANOL CHCL 3	515	41	2.17	2.54	C32H52N2C5\$1	IS OPROPAMIDE-NOVYL SUL FATE
5758	OCTANE	57		0.30		C32H58010	P-T-OCTYLPHENDXYOCTAFTHOXYETHANOL/OPE-8/ PROTO-PORPHYRIN
5759	DIETHYL ETHER DIETHYL ETHER	517 517	19 19	1.23		C 34 H 3 4 N 4 C 4 C 3 4 H 3 8 N 4 C 6	HEMATO-PORPHYRIN
5767 5761	DIETHYL FTER	517	19	C.52		C34 H3 8 N4 C6	MESO-PORPHYRIN
5762	SETTY TYHTEIC	359		r.85	1.62 R	C34H47N1011 C34H47N1C11	ACCNITINE ACCNITINE
5763 5764	CHCL3 DCTANE	359 57		1.77 -C.15	1.28 5	C34H62C11	P-T-OCTYLPHENDXYNON4ETHCXYETHANOL/OPE-9/
5765	DIETHYL ETHER	518		1.09	1.08 4	C35H36N2N6	MONODEMETHYL-L-CURINE 3-AZIOD-3*-DE{DIMEAMIND}-4*-HYDROXYERYTHROMYCIN
5766	OCTANOL DIETHYL ETFER	519 518		1.79 C.15	1.79 = C.25 A	C35H61N3D14 C36H38N2D6	D-CHONDROCURINE
5767 5768	DIETHYL ETHER DIETHYL ETHER	517	19	-C.48	0,0, -	C36H38N4D8	COPRO-PORPHYRIN
5769	OCTANDL	519		2.21	2.21 =	C36H65N1013	N-DESMETHYLERYTHROMYC1N ERYTHROMYCIN C
5770 5771	OCTANDL OCTANE	519 57		1.26 -0.59	1.26 =	C36H65N1D13 C36H66D12	P-T-OCTYLPHENOXYDECAETHOXYETHANOL/OPE-10/
5772	DCTANDL	519		3.12	3.12 =	C37H67N1012	DE CXYERYTHROMYC IN
5773	DIETHYL FTHER	519 519	50	1.59	1.52 A	C37H67N1O12 C37H67N1C12	DEOXYERYTHROMYCIN DEOXYERYTHROMYCIN
5774 5775	SHEXAME CHOL 3	519		2.64		C37467N1012	DECXYERYTHROMYCIN
5776	BENZENE	519		2.18	3.5C 4	C37H67N1012 C37H67N1012	DEDXYERYTHROMYCIN DEDXYERYTHROMYCIN
5777 5778	TOLUENE ETHYL ACETATE	519 519	50	1.86	3.21 4 1.78	C37H67N1012	DEOXYERYTHROMYCIN
5779	1-PENT. ACETATE	519	50	1.90	1.79	C37H67N1C12	DECKYERYTHROMYCIN
5780	¢CL4	519	50	1.36	2.63 N 1.78	C37H67N1012 C37H67N1C12	DEOXYERYTHROMYCIN DEOXYERYTHROMYCIN
5781 5782	OI-I-PR. FTHER	519 519	50	1.30	1.25	C37H67N1012	DECXYERYTHROMYCIN
5783	OCTANOL	519		2.48	2.48 = 1.26 A	C37H67N1013 C37H67N1C13	ERYTHROMYCIN ERYTHROMYCIN
5784 5785		519 519	50	1.30	1.20 4	C37H67N1D13	ERYTHROMYCIN
5786	CHCL 3	519		2.46	2.90 N	C37H67N1013	ERYTHROMYCIN
5787		519 519		1.62	2.94 A 2.85 A		ERYTHROMYCIN ERYTHROMYCIN
5788 5789	TOLUENE ETHYL ACETATE	519	50	1.28	1.43	C37H67N1013	ERYTHROMYC IN
5790	CCL 4	519	E ^	1.25	2.93 A	C37H67N1013 C37H67N1013	ERYTHROMYCIN EKYTHROMYCIN
5791 5792	OI-I-PR. ETHER ME-I-BUT.KETONE	519 519	50 50	0.63 1.16	1.28	C37H67N1013	ERYTHROMYCIN
5793	CIANOL	519		1.44	1.44 =	C37H67N1014	4' -HYDROXYERYTHROMYCIN D-TETRANDRINE/NCS-77037/
5794 6766		65 519	56 55	-2.18 3.11	-2.18 = 3.11 =	C38H42N2C6	ERYTHROMYCIN-9.11-CARBONATE-6,9-HEMIKETAL
5795 5796		148	,,	2.44	2.44 R	C34423461141503	FERRIC-CARBAZONE COMPLEX
5797	OCTANOL	519	54	3.32 -1.27	3.32 = -1.27 =		11-0-ACETYLDEOXYERYTHROMYCIN THALICARPINE (68075)
5798 5799		226 130	,,	1.59	1.73	C41H64O13	DIGITOXIN
5800		65	46	-1.60	-1.60 =	C43H43N7C7S2	NCS-114347

<sup>1</sup> pH 1.1, 37°. <sup>2</sup> At pH = pI net charge = zero. <sup>3</sup> In n-pentyl acetate. <sup>4</sup> Calculated log  $P_{\text{enol}}$  = 1.48; log  $P_{\text{keto}}$  = 0.04; intramolecular H bonds indicated. Preported constant between pH 2 and 6. No log Poet values were calculated because the H-bonding capabilities of boronic acids were greatly influenced by the  $\sigma$  constant of substituents. 7 pH 2.0.8 The large difference between the 3 and 4 isomers is explained in ref acids were greatly initiated by the  $\sigma$  constant of substitutents. P17.0. The large uniteracted between the 3 and 4 isolated in 16 478. Some Compounds with active hydrogens show unusually high  $\log P_{\text{benzene}}$  values. At pH 7.4 plus hexadecylamine; the addition compound is also partitioning, Some lactone also present. By the value appears out of line; the was not used in the regression equation.  $^{13}P_{\text{un-ionized}} = P^*/(1-\alpha)$ , where  $\alpha = \text{degree}$  of dissociation calculated from p $K_a$ . By H 7.4 phosphate buffer; not ion-corrected. By PH 3.5. By H  $\sim 1.0$ , Properties, not buffered or ion-corrected. By H 7.05 phosphate buffer; not compound is also partitioning. By PH 7.05 phosphate buffer is also partitioning. By PH 7.05 phosphate buffer is not buffered or ion-corrected. By PH 7.05 phosphate buffer is not buffered or ion-corrected. 1.0 using HCl. <sup>30</sup> pH -0.22 using HCl. <sup>21</sup> pH 7.1 + octadecylamine; addition compound also partitioning. <sup>22</sup> Value is ratio of solubilities, not a true P, but the activity of an inert gas is nearly unity even at saturation. <sup>23</sup> pH 7.3; ion-corrected <sup>24</sup> pH 7.3; estimated p $K_8 = 4.9$ ; absolute values not very reliable but comparison within series valid. 25 Corrected for ionization and dimerization by method of ref 29. 26 Approximate value. 27 pH 7.3 in ref 489; pH 7.0 in ref 206; both ion-corrected. 28 pH 6.3, ion-corrected. 29 pH 5.9. 30 pH 6.9. 31 pH 7.4; ion-corrected. rected from pKa. Absolute values not reliable, but comparison within series valid. 22 pH 5.4. 25 pH 7.8. 34 pH 6.0. 35 pH 7.1. 36 pH 6.5 using 1 M phosphate buffer; method = countercurrent extraction. <sup>37</sup> pH 7.1 using 0.1 M phosphate + 1 M NaCl. <sup>38</sup> pH 6.6 + 1 M phosphate. <sup>39</sup> pH 6.9 using phosphate buffer. <sup>40</sup> pH 5.6 using phosphate buffer; ref 504 also lists values at pH 2.1-8.5. <sup>41</sup> This reference also lists values for decyl, undecyl, and dodecyl ion pairs. <sup>42</sup> May be dimerized in organic phase. <sup>43</sup> pH 7.5 + 0.2 M phosphate. <sup>44</sup> pH 7.4 using phosphate buffer, ion-corrected. <sup>45</sup> Calculated from the mole fraction partition coefficient  $(P_{MF})$  by the expression  $P = (P_{MF}) \times 18(\text{do})/\text{MW}_{\odot}$ , where do = density of organic solvent and MW<sub>0</sub> = its molecular weight. 46 Ion pair. 47 Calculated from ratio  $C_w/(C_0)^{1/2}$  and the  $K_{\text{dimer}}$  from ref 139. 48 At isoelectric point, pH 5.35. 49 pH 5.8; ion-corrected using p $K_a = 4.8$ . 50 Classification by regression equation appears anomalous. 51 0°. 52 Aqueous phase is 5% HCl. 53 In plastic containers. In alkylpyridinium series, adsorbtion to glass gives values lower by 0.15 (decyl), 0.3 (hexyl), and 0.8 (butyl). 54 Dissolved in HCl, adjusted to pH 6.5. 55 Subject of U. S. Patent 3,417,077 issued to Eli Lilly & Co. <sup>56</sup> pH 4.0. <sup>57</sup> pH 8.0 using 0.02 M phosphate-citrate buffer. <sup>58</sup> Assay procedure: J. Agr. Food Chem., **8**, 460 (1960). <sup>59</sup> Commercial material: 96% pure. <sup>60</sup> pH 11 using Sorenson's buffer. <sup>61</sup> pH 4.7;  $\log P^* = -2.00$  at pH 2.2. <sup>62</sup> Calculated as  $\log P = (pE + 2) - pK_s$ . <sup>63</sup> pH 6.4, ioncorrected. Log P's calculated from  $\pi$  values listed and log  $P_{\text{CHCl}_3} = -1.40$  and log  $P_{\text{oot}} = -0.70$  for sulfanilamide. 84 pH 5.5; phosphate buffer; largely as anion; some polymer possible. 68 pH 7.4 using phosphate buffer; not ion-corrected. 66 pH 8.93 using carbonate buffer; ioncorrected. 67 pH 9.2 using carbonate-bicarbonate buffer; ion-corrected. 68 pH 1.0; approximately half of phenothiazine ring nitrogens protonated. 69 pH 7.6; where solute has two alkyl N atoms, some diprotonation probable. 70 Entered twice: once as enol, once as keto tautomer. <sup>71</sup> pH 12.8; not ion-corrected; ~0.0001% in neutral form. <sup>72</sup> pH 7.32; not ion-corrected; ~0.1% in neutral form. <sup>73</sup> pH 10.15 using carbonate-bicarbonate buffer. 74 pH 13.7; not ion-corrected; ~0.01% in neutral form. 75 pKa measured in acetonitrile which accentuates base strength. <sup>71</sup> Log P at infinite dilution calculated by regression analysis; s = 0.03, r = 0.995. Note: mixed solvent #1 is 67% (by volume) ethyl ether and 33% petroleum ether.

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(164) J. H. Lawrence, W. F. Loomis, C. A. Tobias, and F. H. Turpin, J. Physiol. (London), 105, 197 (1946).
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<sup>(165)</sup> W. Herz and A. Kurzer, Z. Elektrochem. Angew. Phys. Chem., 16, 240, 869 (1910).

<sup>(166)</sup> A. A. Jakowkin, Z. Phys. Chem., 18, 585 (1895).

<sup>(167)</sup> A. A. Jakowkin, ibid., 29, 613 (1899).

<sup>(168)</sup> L. Velluz, C. R. Acad. Sci., 182, 1178 (1926).

<sup>(169)</sup> J. H. Faull, Jr., J. Amer. Chem. Soc., 56, 522 (1934).

<sup>(170)</sup> G. Herrero, An. Soc. Espan. Fis. Quim., 29, 616 (1931); 31, 5, 416 (1933); 34, 549 (1936).

<sup>(171)</sup> L. Tschugajeff and A. J. Lukaschuk, Z. Anorg. Allg. Chem., 172, 223 (1928).

<sup>(172)</sup> D. M. Yost and R. J. White, J. Amer. Chem. Soc., 50, 81 (1928).

<sup>(173)</sup> R. Macy, J. Ind. Hyg. Toxicol., 30, 140 (1948).

<sup>(174)</sup> K. B. Sandell, Naturwissenschaften, 51, 336 (1964)

<sup>(175)</sup> L. F. Audrieth and C. F. Gibbs, Inorg. Syn., 1, 77 (1939).

<sup>(176)</sup> N. A. Kolossowsky, Bull. Soc. Chim. Fr., 37, 372 (1925).

<sup>(177)</sup> W. Perschke and Chufarov, Z. Anorg. Allg. Chem., 151, 121 (1926).

<sup>(178)</sup> J. H. Walton and H. A. Lewis, J. Amer. Chem. Soc., 38, 633 (1916).

<sup>(179)</sup> A. Brann, Ph.D. Thesis, University of Wisconsin, Madison, Wis., 1914; see J. Amer. Chem. Soc., 38, 633 (1916).

<sup>(180)</sup> H. T. Calvert, Z. Phys. Chem., 38, 513 (1901).

<sup>(181)</sup> G. W. E. Plaut, S. A. Kuby, and H. A. Lardy, J. Biol. Chem., 184, 243 (1950).

<sup>(182)</sup> W. Herz and H. Fischer, Chem. Ber., 37, 4746 (1904).

<sup>(183)</sup> G. Georgievics, Monatsh. Chem., 36, 391 (1915).

<sup>(184)</sup> K. Gordon, Ind. Eng. Chem., 45, 1813 (1953).

<sup>(185)</sup> D. M. Yost and W. E. Stone, J. Amer. Chem. Soc., 55, 1889 (1933).

<sup>(186)</sup> C. Hansch and S. Anderson, J. Org. Chem., 32, 2583 (1967).

<sup>(187)</sup> G. Deniges, Bull. Trav. Soc. Pharm. Bordeaux, 78, 61 (1940).

<sup>(188)</sup> A. Hantzsch and A. Vagt, Z. Phys. Chem., 38, 705 (1901).

<sup>(189)</sup> A. J. Courtier, Bull. Soc. Chim. Fr., 15, 528 (1948).

<sup>(190)</sup> R. C. Archibald, J. Amer. Chem. Soc., 54, 3178 (1932)

<sup>(191)</sup> F. Auerbach and H. Zeglin, Z. Phys. Chem., 103, 200 (1922).

<sup>(192)</sup> O. C. Dermer, W. G. Markham, and H. M. Trimble, J. Amer. Chem. Soc., 63, 3524 (1941).

<sup>(193)</sup> N. E. Gordon and E. E. Reid, J. Phys. Chem., 26, 773 (1922).

<sup>(194)</sup> C. S. Marvel and J. C. Richards, Anal. Chem., 21, 1480 (1949).

<sup>(195)</sup> D. E. Pearson and M. Levine, J. Org. Chem., 17, 1351 (1952).

<sup>(196)</sup> H. J. Vogt and C. J. Geankoplis, Ind. Eng. Chem., 45, 2119 (1953).

<sup>(197)</sup> J. Grossfield and A. Miermeister, Z. Anal. Chem., 87, 241 (1932).

<sup>(198)</sup> E. J. Ross, J. Physiol. (London), 112, 229 (1951).

<sup>(199)</sup> E. R. Washburn and H. C. Spencer, J. Amer. Chem. Soc., 56, 361 (1934).

<sup>(200)</sup> S. Y. Gerlsma, J. Biol. Chem., 243, 957 (1968).

<sup>(201)</sup> B. A. Lindenberg, J. Chim. Phys., 48, 350 (1951).

<sup>(202)</sup> W. Wittenberger, Angew. Chem., 61, 412 (1949).

<sup>(203)</sup> N. Komar and L. Manzhelii, Chem. Abstr., 61, 3736 (1964).

<sup>(204)</sup> W. A. Felsing and S. E. Buckley, J. Phys. Chem., 37, 779 (1933).

<sup>(205)</sup> W. Herz and E. Stanner, Z. Phys. Chem., 128, 399 (1927).

<sup>(206)</sup> K. H. Büchel and W. Draber, Progr. Photosyn. Res., 3, 1777

<sup>(207)</sup> O. C. Dermer and V. Dermer, J. Amer. Chem. Soc., 65, 1653 (1943).

<sup>(208)</sup> K. Drucker, Z. Phys. Chem., 49, 563 (1904).

<sup>(209)</sup> M. Bodansky and V. Meigs, J. Phys. Chem., 36, 814 (1932).

<sup>(210)</sup> R. Kerley and C. Hansch, unpublished analysis.

<sup>(211)</sup> P. Bhattacharyya, J. Indian Chem. Soc., 32, 387 (1955).

<sup>(212)</sup> E. E. Chandler, J. Amer. Chem. Soc., 30, 696 (1908).

<sup>(213)</sup> J. Pinnow, Z. Anal. Chem., 54, 321 (1915).

<sup>(214)</sup> F. Baum, Arch. Exp. Pathol. Pharmakol., 42, 119 (1889).

<sup>(215)</sup> G. Georgievics, Z. Phys. Chem., 90, 47 (1915).

<sup>(216)</sup> W. J. Dunn III and C. Hansch, unpublished analysis.

<sup>(217)</sup> N. Kakeya, N. Yata, A. Kamada, and M. Aoki, Chem. Pharm. Bull., 17, 2558 (1969).

<sup>(218)</sup> S. Anderson and C. Hansch, unpublished analysis.

<sup>(219)</sup> V. Rothmund and N. T. M. Wilsmore, Z. Phys. Chem., 40, 611 (1902).

<sup>(220)</sup> M. Bodansky, J. Biol. Chem., 79, 241 (1928).

<sup>(221)</sup> C. H. Werkman, Ind. Eng. Chem., Anal. Ed., 2, 302 (1930).

<sup>(222)</sup> V. P. Sumarokov and Z. M. Volodutskaya, Chem. Abstr., 54, 8225 (1960).

(223) G. Weissenberger, F. Schuster, and L. Piatti, Z. Anorg. Allg. Chem., 151, 77 (1926). (224) K. H. Meyer and H. Gottlieb-Billroth, Z. Physiol. Chem., 112, 55 (1921). (225) A. England, Jr., and E. J. Cohn, J. Amer. Chem. Soc., 57, 636 (1935). (226) National Cancer Institute, Drug Development Branch, private communication. (227) Midwest Research Institute (under contract with the National Cancer Institute, NIH No. 69-2113), private communication. (228) G. Aksnes, Acta Chem. Scand., 14, 1447 (1960). (229) R. D. Vold and E. R. Washburn, J. Amer. Chem. Soc., 54, 4217 (1932). (230) A. B. Lindenberg, Soc. Biol. Strasbourg, 116, 1405 (1934). (231) E. Hutchinson, J. Phys. Chem., 52, 897 (1948). (232) J. L. Morgan and H. K. Benson, Z. Anorg. Chem., 55, 356 (1907). (233) S. Bugarszky, Z. Phys. Chem., 71, 753 (1910). (234) M. Nakano and N. K. Patel, J. Pharm. Sci., 59, 77 (1970). (235) D. Nikaitani and C. Hansch, unpublished results. (236) D. C. Stewart and H. W. Crandall, J. Amer. Chem. Soc., 73, 1377 (1951). (237) W. Walter and H. Weidemann, Monatsh. Chem., 93, 1235 (1962). (238) E. J. Lien and C. Hansch, unpublished results. (239) F. K. Bell, J. J. O'Neill, and R. M. Burgisan, J. Pharm. Sci., 52, 637 (1963). (240) P. Needleman and F. E. Hunter, Jr., Mol. Pharmacol., 2, 134 (1966). (241) R. G. Ross and R. A. Ludwig, Can. J. Bot., 35, 65 (1957). (242) W. Kemula, H. Buchowski, and R. Lewandowski, Chem. Abstr., 61, 8945 (1964). (243) W. Herz and W. Rathmann, Z. Elektrochem., 19, 552 (1913). (244) P. Gross and K. Schwarz, Monatsh. Chem., 55, 287 (1930). (245) J. Traube, "E. Pflüger," Arch. Physiol., 105, 541 (1904). (246) W. Herz and P. Schuftan, Z. Phys. Chem., 101, 269 (1922) (247) R. Deitzel and E. Rosenbaum, Biochem. Z., 185, 275 (1927). (248) K. B. Sandell, Monatsh. Chem., 89, 36 (1958). (249) E. Knaffi-Lenz, Arch. Exp. Pathol. Pharmacol., 84, 66 (1919). (250) W. Kemula, H. Buchowski, and J. Teperek, Bull. Acad. Pol. Sci., Ser. Sci. Chim., 12, 343 (1964). (251) K. B. Sandell, Naturwissenschaften, 49, 12 (1962). (252) H. G. Mandel, E. L. Alpen, W. D. Winters, and P. K. Smith, J. Biol. Chem., 193, 63 (1951). (253) J. F. Tinker and G. B. Brown, ibid., 173, 585 (1948). (254) C. A. Hogben, D. J. Tocco, B. B. Brodie, and L. S. Schanker, J. Pharmacol, Exp. Ther., 125, 275 (1959). (255) J. Iwasa, T. Fujita, and C. Hansch, J. Med. Chem., 8, 150 (1965). (256) K. Butler, H. Howes, J. Lynch, and D. Pirie, ibid., 10, 891 (1967). (257) W. L. Ruigh and A. E. Erickson, Anesthesiology, 2, 546 (1941). (258) C. D. Leake and M. Chen, Soc. Exp. Biol. Med., 28, 151 (1930). (259) J. C. Kranz, Jr., C. J. Carr, and W. E. Evans, Jr., Anesthesiology, 5, 291 (1944). (260) E. J. Lien, J. Med. Chem., 14, 653 (1971). (261) E. Kutter, Karl Thomae, GmbH, Biberach, West Germany, unpublished analysis. (262) W. Dedek, Monatsber. Deut. Akad. Wiss. (Berlin), 4, 225 (1962). (263) R. Gaunder and W. Hoffman, Chem. Abstr., 64, 13729 (1966). (264) A. Eeckhout, Arch. Exp. Pathol. Pharmacol., 57, 338 (1907). (265) V. Sovostina, E. Astakhova, and V. Peshkova, Chem. Abstr., 59, 1062 (1963). (266) A. Babko and P. Mikhelson, Ukr. Khim. Zh., 21, 388 (1955). (267) N. M. Cone, S. E. Forman, and J. C. Kranz, Jr., Proc. Soc. Exp. Biol. Med., 48, 461 (1941). (268) W. R. Glave and C. Hansch, unpublished analysis. (269) R. Dietzel and P. Schmitt, Z. Unters. Lebensm., 63, 369 (1932). (270) D. Mackintosh and C. Hansch, unpublished analysis. (271) S. Öksne, Acta Chem. Scand., 13, 1814 (1959). (272) E. Meeussen and P. Huyskens., J. Chim. Phys., 63, 845 (1966). (273) V. S. Morello and R. B. Beckmann, Ind. Eng. Chem., 42, 1078 (1950). (274) D. Dyrssen, S. Ekberg, and D. H. Liem, Acta Chem. Scand., 18, 135 (1964). (275) P. J. Gehring, T. R. Torkelson, and F. Oyen, *Toxicol. Appl. Pharmacol.*, 11, 361 (1967). (276) M. Tute, Pfizer Corp., Sandwich, Kent, England, unpublished analysis. (277) N. Kolassa, K. Pfleger, and W. Rummel, Eur. J. Pharmacol., 9, 265 (1970). (278) W. G. Scribner, W. J. Treat, J. D. Weis, and R. W. Moshier, Anal. Chem., 37, 1136 (1965). (279) T. Wakahayashi, S. Oki, T. Omori, and N. Suzuki, J. Inorg. Nucl. Chem., 26, 2255 (1964).

(280) C. Golumbic and M. Orchin, J. Amer. Chem. Soc., 72, 4145 (1950).

(281) R. M. Woodman and A. S. Corbet, J. Chem. Soc., 2461 (1925). (282) A. Albert, ibid., 1376 (1951). (283) J. Schaeffer and C. Hansch, Sandwich, Kent, England, unpublished analysis. (284) S. Rich and J. G. Horsfall, Phytopathology, 42, 457 (1952). (285) D. Stevancevic and V. Antonijevic, Chem. Abstr., 63, 17215 (1965).(286) J. Rydberg, Svensk. Kem. Tidskr., 62, 179 (1950). (287) I. Starnik, N. Ampelogova, and B. Kuznetsov, Radiokhimiya, 6, 519 (1964). (288) N. A. Kolosovskii and N. P. Ponomareva, J. Gen. Chem. (USSR), 4, 1077 (1934). (289) Southern Research Institute (under contract with National Cancer Institure NIH No. 71-2021), private communication. (290) I. Odaira, Mem. Coll. Sci., Kyoto Imp. Univ., 1, 324 (1916). (291) J. Grossfield and A. Miermeister, Z. Anal. Chem., 85, 321 (1931). (292) P. Harrass, Arch. Int. Pharmacodynam. Ther., 11, 431 (1903). (293) R. Bierick, "E. Pfüger," Arch. Physiol., 174, 202 (1919). (294) N. P. Komar and A. K. Khukhryanskii, Chem. Abstr., 65, 6523 (1966). (295) L. Craig, Anal. Chem., 22, 1346 (1950). (296) R. Siebeck, Arch. Exp. Pathol. Pharmacol., 95, 93 (1922). (297) M. E. Eldefrawi and R. D. O'Brien, J. Exp. Biol., 46, 1 (1967). (298) V. Lee, M. S. Thesis, San Jose State College, Aug 1967. (299) V. H. Parker, Biochem. J., 97, 658 (1965). (300) R. J. Pinney and V. Walters, J. Pharm. Pharmacol., 21, 415 (1969). (301) M. Tichy and K. Bocek, Institute of Industrial Hygiene and Occupational Diseases, Prague, Czechoslovakia, private communication. (302) T. Fujita and C. Hansch, unpublished analysis. (303) H. Freundlich and D. Kruger, Z. Elektrochem., 36, 305 (1930). (304) C. E. Lough, R. F. Silver, and F. K. McClusky, Can. J. Chem., 46, 1943 (1968). (305) A. Unmack, Chem. Zentr., 2, 1862 (1934). (306) A. S. Keston, S. Udenfriend, and M. Levy, J. Amer. Chem. Soc., 72, 748 (1950). (307) W. Kemula and H. Buchowski, J. Phys. Chem., 63, 155 (1959). (308) W. Kemula, H. Buchowski and J. Teperek, Bull. Acad. Pol. Sci., Ser. Sci. Chim., 12, 347 (1964). (309) K. S. Rogers and A. Cammarata, J. Med. Chem., 12, 692 (1969). (310) C. L. DeLigny, J. H. Kreutzer, and G. F. Visserman, Rec. Trav. Chim. Pays-Bas, 85, 5 (1966). (311) A. H. Soloway, B. Whitman, and J. Messer, J. Pharmacol. Exp. Ther., 129, 310 (1960). (312) Y. Ichikawa, T. Yamono, and H. Fujishima, Biochim. Biophys. Acta, 171, 32 (1969). (313) B. Flürscheim, J. Chem. Soc., 97, 84 (1910). (314) W. Kemula, H. Buchowski, and W. Pawlowski, Rocz. Chem., 42, 1951 (1968). (315) G. Williams and F. G. Soper, J. Chem. Soc., 2469 (1930). (316) J. Cymerman-Craig, S. D. Rubbo, and B. J. Pierson, Brit. J. Exp. Pathol., 35, 478 (1954). (317) S. Voerman, Bull. Environ. Contam. Toxicol., 4, 64 (1969). (318) K. Kakemi, H. Sezaki, K. Okamura, and S. Ashida, Chem. Pharm. Bull., 17, 1332 (1969). (319) W. Kemula, H. Buchowski, and W. Pawlowski, Bull. Acad. Pol. Sci., Ser. Sci. Chim., 12, 491 (1964). (320) Z. Hagiwara, Technol. Rep., Tohoku Univ., 18, 16 (1953). (321) D. M. Kemp, Anal. Chim. Acta, 27, 480 (1962). (322) P. Mazel and J. F. Henderson, Biochem. Pharmacol., 14, 92 (1965). (323) J. Lindberg, Chem. Abstr., 54, 14877 (1960). (324) A. B. Lindenberg and M. Massin, J. Chim. Phys., 61, 112 (1964). (325) N. C. Saha, A. Bhattacharjee, N. Basak, and A. Lahiri, J. Chem. Eng. Data, 8, 405 (1963). (326) L. S. Schanker, J. M. Johnson, and J. J. Jeffrey, Amer. J. Physiol., 207, 503 (1964). (327) R. C. Doerr and W. Fiddler, J. Agr. Food Chem., 18, 937 (1970). (328) F. A. Philbrick, J. Amer. Chem. Soc., 56, 2581 (1934). (329) Vaubel, J. Prakt. Chem., 67, 473 (1903). (330) J. C. Philip and H. D. Clark, J. Chem. Soc., 127, 1274 (1925). (331) B. I. Ivanov and V. V. Makeikina, Chem. Abstr., 62, 15896 (1965). (332) J. Halmekoski and A. Nissema, Suomen Kemistilehti B, 35, 188 (1962). (333) J. Pinnow, Z. Anal, Chem., 50, 162 (1911). (334) R. A. Robinson, J. Chem. Soc., 253 (1952). (335) A. G. Foster and I. R. Siddiqi, ibid., 4906 (1961). (336) B. I. Tokarev and V. I. Sharkov, Chem. Abstr., 58, 662 (1963). (337) C. Golumbic and G. Golbach, J. Amer. Chem. Soc., 73, 3966 (338) S. Mayer, R. P. Maickel and B. B. Brodie, J. Pharm. Exp. Ther., 127, 205 (1959).

- (339) R. Riedel, Z. Phys. Chem., 56, 243 (1906).
- (340) B. B. Brodie, H. Kurz, and L. S. Schanker, J. Pharm. Exp. Ther., 130, 20 (1960).
- (341) T. Fujita, Y. Soeda, I. Yamamoto, and M. Nakajima, Department of Agricultural Chemistry, Kyoto University, Kyoto, Japan, private communication.
- (342) H. Davson, J. Physiol., 110, 416 (1950).
- (343) T. Koizumi, T. Arita, and K. Kakemi, Chem. Pharm. Bull., 12, 413 (1964).
- (344) D. Rall, J. R. Stabenau, and C. G. Zubrod, J. Pharmacol. Exp. Ther., 125, 8123 (1959).
- (345) D. L. Tabern and E. F. Shelberg, J. Amer. Chem. Soc., 55, 328 (1933).
- (346) J. Iwasa and C. Hansch, unpublished analysis.
- (347) M. Lubieniecki, Chem. Abstr., 63, 13927 (1965).
- (348) K. A. Zirvi and C. H. Jarboe, J. Med. Chem., 12, 923 (1969).
- (349) E. Coats and C. Hansch, unpublished analysis.
- (350) D. Pressman, L. Brewer, and H. J. Lucas, J. Amer. Chem. Soc., 64, 1117 (1942).
- (351) T. E. Gier and J. O. Hougen, Ind. Eng. Chem., 45, 1362 (1953). (352) E. Fourneau and G. Florence, Bull. Soc. Chim. Fr., 43, 1027 (1928).
- (353) E. S. Hyman, Biophys. J., 6, 405 (1966).
- (354) Y. Turyan, P. Zaitsev, and Z. Zaitseva, Chem. Abstr., 58, 70 (1963).
- (355) N. A. Kolosov. USSR, 4, 1070 (1934). Kolosovskii and S. V. Andryushchenko, J. Gen. Chem.
- (356) B. Szyszkowski, Chem. Abstr., 9, 2014 (1915). (357) D. R. Reese, G. M. Irwin, L. W. Dittert, C. W. Chong, and J. V. Swintosky, J. Pharm. Sci., 53, 591 (1964).
- (358) J. C. McGowan, P. N. Atkinson, and L. H. Ruddle, J. Appl. Chem., 16, 99 (1966).
- (360) K. S. Rogers and A. Cammarata, Biochim. Biophys. Acta, 193, 22 (1969).
- (361) T. C. Daniels and R. E. Lyons, J. Phys. Chem., 35, 2049 (1931).
- (362) L. H. Baldinger and J. A. Nieuwland, J. Amer. Pharm. Assoc., 22, 711 (1933).
- (363) F. T. Wall, J. Amer. Chem. Soc., 64, 472 (1942).
- (364) A. Klein, Rocz. Chem., 5, 101 (1925).
- (365) J. Tollenaere, Janssen Research, Beerse, Belgium, private communi-
- (366) K. B. Sandell, Naturwissenschaften, 49, 348 (1962).
- (367) D. Dyrssen, Acta Chem. Scand., 8, 1394 (1954).
- (368) K. Kakemi, H. Sezaki, E. Suzuki, and M. Nakano, Chem. Pharm-Bull., 17, 242 (1969).
- (369) A. Seidell, ref 1, p 530.
- (370) K. Kakemi, T. Arita, S. Kitazawa, M. Kawamura, and H. Takenada, Chem. Pharm. Bull., 15, 1819 (1967).
- (371) G. Aiello, Biochem. Z., 124, 192 (1921).
- (372) A. C. McCulloch and B. H. Stock, Aust. J. Pharm., 48, S14 (1966).
- (373) A. M. Reynard, J. Pharmacol, Exp. Therap., 163, 461 (1968).
- (374) H. Thies and E. Ermer, Naturwissenschaften, 49, 37 (1962).
- (375) A. Taubman, Z. Phys. Chem., 161A, 141 (1932).
- (376) A. B. Hadaway, F. Barlow, J. E. Grose, C. R. Turner, and L. S. Flower, Bull. WHO, 42, 369 (1970).
- (377) E. A. Hosein, P. Rambaut, J. G. Charbol, and A. Orzeck, Arch. Biochem. Biophys., 111, 540 (1965).
- Sekera, A. Borovansky, and C. Vrba, Ann. Pharm. Fr., 16, (378) A. Se 525 (1958).
- (379) O. T. G. Jones and W. A. Watson, Biochem. J., 102, 564 (1967).
- (380) E. King and W. Reas, J. Amer. Chem. Soc., 73, 1804 (1951).
- (381) R. J. Lukens, and J. G. Horsfall, Phytopathol., 57, 876 (1967).
- (382) J. H. Wilkinson, Biochem. J., 54, 485 (1953).
- (383) W. A. Bittenbender and E. F. Degering, J. Amer. Pharm. Assoc., 28, 514 (1939).
- (384) K. Kamoshita, Sumitomo Chemical Co., private communica-
- (385) G. C. Gross, E. F. Degering, and P. A. Tetrault, *Proc. Indiana Acad. Sci.*, 49, 42 (1939).
- (386) P. P. Maloney and C. Hansch, unpublished analysis.
- (387) A. P. Zozulya, N. N. Mezentsova, V. M. Peshkova, and Y. K. Yurev, Zh. Anal. Chim., 14, 15 (1959).
- (388) N. V. Melchakova, N. N. Mezentsova, A. Pen, V. M. Peshkova, and Y. Yurev, Chem. Abstr., 57, 2910 (1962).
- (389) Z. Ziolkowski, J. Respondek, and A. Olszowski, ibid., 60, 5743 (1964).
- (390) J. Büchi, X. Perlia, and A. Strässle, Arzneim.-Forsch., 16, 1657 (1966).
- (391) A. B. Hadaway and F. Barlow, Bull. Entom. Res., 56, 569 (1966).
- (392) P. S. Jaglan and F. A. Gunther, Analyst (London), 95, 763 (1970). (393) M. Yamazaki, N. Kakeya, T. Morishita, A. Kamada, and M. Aoki, Chem. Pharm. Bull., 18, 708 (1970).

- (394) W. O. Emery and C. D. Wright, J. Amer. Chem. Soc., 43, 2323 (1921).
- (395) H. J. Teschemacher, Nauyn-Schmiedebergs Arch, Pharmakol. Exp. Pathol., 255, 85 (1966).
- (396) T. B. Vree, A. Muskens, and J. M. Van Rossum, J. Pharm, Pharmacol., 21, 744 (1969).
- (397) H. J. Schaeffer, R. N. Johnson, E. Odin, and C. Hansch, J. Med. Chem., 13, 452 (1970).
- (398) L. C. Mark, J. J. Burns, L. Brand, C. I. Campomanes, N. Trousof, E. M. Papper, and B. B. Brodie, J. Pharmacol. Exp. Therap., 123, 70 (1958).
- (399) K. Kakemi, T. Arita, R. Hori, and R. Konishi, Chem. Pharm. Bull., 15, 1705 (1967).
- (400) A. Herz, H. Holzhäuser, and H. Teschemacher, Naunyn-Schmiedebergs Arch, Pharmakol. Exp. Pathol., 253, 280 (1966).
- (401) Y. Tsuzuki, Bull. Chem. Soc. Jap., 13, 337 (1938).
- (402) G. E. Crevar and R. W. Goettsch, J. Pharm. Sci., 55, 446 (1966).
- (403) D. Dyrssen, Acta Chem. Scand., 11, 1771 (1957).
- (404) B. F. Greenfield and C. J. Hardy, J. Inorg. Nucl. Chem., 21, 359 (1961).
- (405) K. Kakemi, H. Sezaki, S. Muranishi, and Y. Tsujimura, Chem. Pharm. Bull., 17, 1650 (1969).
- (406) D. V. Richmond, E. Somers, and C. Zaracovitis, Nature, 204, 1329
- (407) P. Ritter and M. Jermann, Arzneim.-Forsch., 16, 1647 (1966).
- (408) J. Bankovskis, D. Zaruma, A. Ievins, and I. Labrence, Chem. Abstr., 64, 2809 (1966).
- (409) M. W. Whitehouse and J. E. Leader, Biochem. Pharmacol., 16, 537 (1967).
- (410) H. A. Mottola and H. Freiser, Talanta, 13, 55 (1966).
- (411) V. Bodnya and I. Alimarin, Chem. Abstr., 67, 15400 (1967).
- (412) J. Fresco and H. Freiser, Anal. Chem., 36, 631 (1964).
- (413) J. Bankovskis and A. Ievins, Zh. Anal. Khim., 18, 555 (1963).
- (414) W. Dieckmann and A. Hardt, Chem. Ber., 52, 1134 (1919).
- (415) E. Nelson, J. Med. Chem., 5, 211 (1962).
- (416) K. Kakemi, T. Arita, S. Kitazawa, and Y. Sagawa, Chem. Pharm. Bull., 15, 1828 (1967).
- (417) R. H. Goshorn and E. F. Degering, J. Amer. Pharm, Assoc., 27, 865 (1938).
- (418) R. Adams, E. Rideal, W. Brunett, R. Jenkins, and E. Dreger, J. Amer. Chem. Soc., 48, 1762 (1926).
- (419) A. M. Hjort, E. J. de Beer, J. S. Buck, and W. S. Ide, J. Pharm. Exp. Ther., 55, 152 (1935). Ureas in this reference are unsymmetrically substituted.
- (420) J. E. Bacher and F. W. Allen, J. Biol. Chem., 188, 59 (1951).
- (421) R. E. McMahon, J. Med. Chem., 4, 67 (1961).
- (422) K. W. Rosenmund and E. Karg, Chem. Ber., 75B, 1850 (1942).
- (423) B. Weibull, Ark. Kemi, 3, 225 (1951).
- (424) H. L. Johnson, P. Tsakotellis, and J. I. DeGraw, J. Pharm. Sci., 59, 278 (1970).
- (425) J. Y. MacDonald, J. Amer. Chem. Soc., 57, 771 (1935).
- (426) D. Dyrssen and D. Petkovic, J. Inorg. Nucl. Chem., 27, 1381 (1965).
- (427) C. Hansch and T. Fujita, J. Amer. Chem. Soc., 86, 1616 (1964).
- (428) M. Gorin and C. Hansch, unpublished analysis.
- (429) I. Stary and N. Rudenko, Chem. Abstr., 53, 5828 (1959). (430) S. Kang and J. P. Green, Nature, 222, 794 (1969).
- (431) D. F. Elliott, Biochem. J., 45, 429 (1949).
- (432) R. E. Hanschumacher and J. R. Vane, J. Pharmacol. Chemother, 29, 105 (1967).
- (433) F. Sandberg, Acta Physiol. Scand., 24, 7 (1951).
- (434) C. V. Bowen, Ind. Eng. Chem., 41, 1295 (1949).
- (435) C.O. Badgett, ibid., 42, 2530 (1950).
- (436) A. Seidell, ref 1, p 674.
- (437) W. B. Neely, W. E. Allison, W. B. Crummett, K. Kauer, and W. Reifschneider, J. Agr. Food Chem., 18, 45 (1970).
- (438) R. D. Poretz and I. J. Goldstein, Arch. Biochem. Biophys., 125, 1034 (1968).
- (439) J. Cymerman-Craig, S. D. Rubbo, J. W. Loder, and B. J. Pierson, Brit. J. Exp. Pathol., 36, 261 (1955).
  (440) A. Brunzell, J. Pharm. Pharmacol., 8, 329 (1956).
- (441) B. T. Ho, G. E. Fritchie, P. M. Kralik, L. W. Tansey, K. E. Walker, and W. M. McIsaac, J. Pharm. Sci., 58, 1423 (1969).
- (442) L. Brand, L. C. Mark, M. Snell, P. Vrindten, and P. G. Dayton, Anesthesiology, 24, 331 (1963). (443) J. Cymerman-Craig and W. K. Warburton, Aust. J. Chem., 9, 294
- (444) E. R. Garrett, J. B. Mielck, J. K. Seydel, and H. J. Kessler, J. Med. Chem., 12, 740 (1969).
- (445) C. Golumbic and S. Weller, Anal. Chem., 22, 1418 (1950)
- (446) D. J. Currie and H. L. Holmes, Can. J. Chem., 48, 1340 (1970).
- (447) M. Covello, Rend. Accad. Sci. Napoli, 2, 73 (1932).

- (448) P. K. Gessner, D. D. Godse, A. H. Krull, and J. M. McMullan, Life Sci., 7, 267 (1968). (449) A. Brandstrom, Acta Pharm. Suecica, 1, 159 (1964). (450) B. E. Leach and C. M. Teeters, J. Amer. Chem. Soc., 73, 2794 (1951). (451) I. Pyatnitskii and R. Kharchenko, Chem. Abstr., 60, 7433 (1964). (452) T. Ishimori and T. Fujino, Ibid., 58, 3948 (1963). (453) A. Albert, R. Goldacre, and E. Heymann, J. Chem. Soc., 651 (1943). (454) S. Balt and E. Van Dalen, Anal. Chim. Acta, 27, 188 (1962). (455) B. E. McClellan and H. Freiser, Anal. Chem., 36, 2262 (1964). (456) S. H. Crowdy, J. F. Grove, and P. McCloskey, Biochem. J., 72, 241 (1959). (457) K. H. Dudley and H. W. Miller, J. Med. Chem., 13, 535 (1970). (458) E. Druckrey, Farbwerke Hoechst, Frankfurt (Main), W. Germany, private communication. (459) J. Büchi, G. Fischer, M. Mohs, and X. Perlia, Arzneim.-Forsch., 19, 1183 (1969). (460) J. Buchi, J. Doulakas, and X. Perlia, ibid., 19, 578 (1969). (461) J. Eisenbrand and H. Picher, Arch. Pharm. (Weinhelm), 276, 1 (1938). (462) O. Schaumann, Arch. Exp. Pathol. Pharm., 190, 30 (1938). (463) K. Bowden and R. C. Young, J. Med. Chem., 13, 225 (1970). (464) F. Plakogiannis, E. J. Lien, C. Harris, and J. A. Biles, J. Pharm. Sci., 59, 197 (1970).
- (465) L. Fieser, J. Amer. Chem. Soc., 70, 3237 (1948).
  (466) M. H. Bickel and H. J. Weder, J. Pharm. Pharmacol., 21, 160 (1969).
- (467) P. Courtemanche and J. Merlin, C. R. Acad. Sci., 260, 3053 (1965).
- (468) E. J. Lien, M. Hussain, and M. P. Golden, J. Med. Chem., 13, 623 (1970).
  (469) F. Wulfert, P. Bolla, and J. Mathieu, Bull. Chim. Therap., 4, 257
- (469) E. Wulfert, P. Bolla, and J. Mathieu, Bull. Chim. Therap., 4, 257 (1969).

  (470) K. Verebely, H. Kutt, Y. Sohn, B. Levitt, and A. Raines, Eur. J. Pharmacol., 10, 106 (1970).
- Pharmacol., 10, 106 (1970). (471) F. G. Zharovski and R. I. Sukhomlin, Ukr. Khim. Zh., 33, 509 (1967).
- (472) P. D. Hopkins and B. E. Douglas, Inorg. Chem., 3, 357 (1964).
   (473) C. Rohmann and T. Eckert, Arch. Pharm. (Weinheim), 291, 450
- (1958). (474) H. Nogami, J. Hasegawa, S. Nakatsuka, and K. Noda, Chem. Pharm. Bull., 17, 228 (1969).
- Pharm. Bull., 17, 228 (1969). (475) K. S. Murthy and G. Zografi, J. Pharm. Sci., 59, 1281 (1970).
- (476) S. Umezawa, T. Suami, K. Maeda, and S. Nakada, J. Chem. Soc. Jap., Ind. Chem. Sect., 52, 30 (1949).
- (477) A. Herz, H. Teschemacher, A. Hofstetter, and H. Kurz, Int. J. Neuropharmacol., 4, 207 (1965).
- (478) R. P. Quitana, J. Pharm. Sci., 54, 462 (1965).
  (479) P. Mukerjee, J. Phys. Chem., 69, 2821 (1965).
- (480) E. Szabo and J. Szabon, Chem. Abstr., 65, 11411 (1966).
- (481) Y. Zolotov and V. Lambrev, ibid., 65, 9808 (1966).
- (482) E. W. Baur, J. Pharmacol, Exp. Ther., 177, 219 (1971).

- (483) H. Glasser and J. Krieglstein, Naunyn-Schmiedebergs Arch. Pharmakol. Exp. Pathol., 265, 321 (1970).
- (484) E. Angadji and J. Colleter, Bull. Soc. Pharm. Bordeaux, 101, 147 (1962).
- (485) J. Krieglstein and G. Kuschinsky, Naunyn-Schmiedebergs Arch-Pharmakol. Exp. Pathol., 262, 1 (1969).
- (486) T. S. Mao and J. J. Noval, Biochem. Pharmacol., 15, 501 (1966).
- (487) R. Greene and A. Black, J. Amer. Chem. Soc., 59, 1820 (1937). (488) M. L. Jacobs and G. L. Jenkins, J. Amer. Pharm. Assoc., 26, 599
- (489) J. Büchi and X. Perlia, Arzneim.-Forsch., 10, 930 (1960).
- (490) R. P. Quintana and W. R. Smithfield, J. Med. Chem., 10, 1178 (1967).
- (491) A. Englehardt and H. Wick, Arzneim.-Forsch., 7, 217 (1957).
- (492) V. Bashilova and N. Figurovski, Aptech. Delo, 8, 20 (1959).
- (493) H. Baggesgaard-Rasmussen and I. Martins, Arch. Pharm., 269, 1 (1930).
- (494) G. Valette and J. Etcheverry, C. R. Soc. Biol., 152, 315 (1958).
- (495) A. F. Casy and J. Wright, J. Pharm. Pharmacol., 18, 677 (1966).
- (496) G. F. Marrian and A. Sneddon, Biochem. J., 74, 430 (1960).
- (497) A. Michaelis and T. Higuchi, J. Pharm. Sci., 58, 201 (1969).
- (498) A. Munck, J. F. Scott, and L. L. Engle, Biochim. Biophys. Acta, 26, 397 (1957).
- (499) J. Cymerman-Craig, S. Rubbo, and B. J. Pierson, Brit. J. Exp. Pathol., 36, 254 (1955).
- (500) H. Shindo, K. Okamoto, and J. Totsu, Chem. Pharm. Bull., 15, 295 (1967).
- (501) L. F. Knudsen and D. C. Grove, Ind. Eng. Chem., Anal. Ed., 14, 556 (1942).
- (502) G. L. Flynn, J. Pharm. Sci., 60, 345 (1971).
- (503) F. M. Plakogiannis, Pharm. Acta Helv., 46, 236 (1971).
- (504) J. L. Colaizzi and P. R. Klink, J. Pharm. Sci., 58, 1184 (1969).
- (505) D. Hammick and S. Mason, J. Chem. Soc., 345 (1950).
- (506) A. Seidell, ref 1, p 813. (507) H. Carstensen, Acta Chem. Scand., 9, 1026 (1955).
- (508) M. Katz and Z. I. Shaikh, J. Pharm. Sci., 54, 591 (1965).
- (509) M. R. Boots and S. G. Boots, ibid., 58, 553 (1969).
- (510) E. Titus and J. Fried, J. Biol. Chem., 174, 57 (1948).
- (\$11) H. Brockmann, K. Bauer, and I. Borchers, Chem. Ber., 84, 700 (1951).
- (512) C. B. Thorne and W. H. Peterson, J. Biol. Chem., 176, 413 (1948).
- (513) L. Mantica, R. Ciceri, J. Cassagne, and E. Mascitelli-Coriandoli, Arzneim,-Forsch., 20, 109 (1970).
- (514) B. E. Leach, W. H. Vries, H. A. Nelson, W. G. Jackson, and J. S. Evans, J. Amer. Chem. Soc., 73, 2797 (1951).
- (515) J. A. Biles, F. M. Plakogiannis, B. J. Wong, and P. M. Biles, J. Pharm. Sci., 55, 909 (1966).
- (516) V. Das Gupta and D. E. Cadwallader, ibid., 57, 2140 (1968).
- (517) A. Keys and J. Brugsch, J. Amer. Chem. Soc., 60, 2135 (1938).
- (518) E. Hultin, Acta Chem. Scand., 15, 879 (1961).
- (519) L. T. Sennello, Abbott Laboratories, North Chicago, Ill., private communication.

# Drug-Phospholipid Interactions. 2. Predicting the Sites of Drug Distribution Using *n*-Octanol/Water and Membrane/Water Distribution Coefficients

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Abstract The *in vivo* tissue distribution of seventeen drugs has been modeled by using estimated *n*-octanol/water and membrane/water distribution coefficients. In this study, the membrane affinities are estimated using the new technique of immobilized artificial membrane (IAM) column chromatography.  $\Delta(\log D_{(n-\text{octanol/water-membrane/water})})$ , which measures a hypothetical equilibrium of the drug between of *n*-octanol and membrane phase, is a better model of *in vivo* tissue distribution, as measured by Adipose Tissue Storage Index (ASI), than either *n*-octanol/water or membrane/water distribution coefficients alone. This demonstrates the importance of membrane distribution coefficients as a complementary descriptor of lipophilicity to *n*-octanol/water distribution coefficients, in modeling *in vivo* distribution of drugs. This rapid method for predicting *in vivo* distribution of drugs, based on *n*-octanol and membrane/water distribution coefficients, may be a useful tool to aid the selection of drugs with beneficial pharmacokinetic profiles.

## Introduction

The importance of lipophilicity in controlling absorption and distribution of drugs has been recognized for over 90 years.<sup>1,2</sup> Over the years several model partitioning systems have been used to describe lipophilicity, but the system that has achieved the greatest importance has been n-octanol/water. This measurement of lipophilicity has been shown to relate to all aspects of drugs absorption and distribution, from gastrointestinal tract absorption to blood—brain barrier penetration.<sup>3</sup> However, in an earlier paper we demonstrated that n-octanol/water distribution coefficients do not reproduce the partitioning behavior of all classes of compounds in model membrane systems.<sup>4</sup>

Many basic amines show a much higher partition into artificial membrane vesicles than one would expect considering their n-octanol/water distribution coefficients. Hydrophobic solvents such as n-octanol can only support the efficient partitioning of the neutral form of the drug. An ordered phospholipid bilayer, however, can support the partitioning of both the neutral and positively charged form of amines. In some cases, the partition of the charged form is as favorable or more favorable than the partition of the neutral form. This is because protonated amines can make an interaction between their positive charge and the negatively charged phosphate of the head group of the ordered phospholipid membrane. It is the ordered nature of the phospholipid membrane that makes this interaction possible. The distribution of charge and hydrophobicity of the drug is complementary to that of the ordered phospholipid membrane, a situation that could not exist between the drug and an isotropic hydrophobic solvent.5

The importance of this interaction in vivo has been indicated by Smith and co-workers, who have examined the volume of distribution (V) of many drugs with their log-

 $D_{n-{
m octanol/water}}$  distribution coefficients. The authors show that amines have higher volume of distribution than acids or neutral compounds of comparable  $\log D_{n-{
m octanol/water}}$ . They suggest this is due to the increased membrane affinity of amines. Membrane/water distribution coefficients may therefore be a better model of the extent of distribution in vivo than n-octanol/water distribution coefficients. In this paper we provide evidence that sites of drug tissue distribution, as measured by the Adipose Tissue Storage Index (ASI), can be modeled by consideration of both n-octanol/water and membrane/water distribution coefficients. The  $\Delta(\log D_{(n-{
m octanol/water-membrane/water)})$  descriptor is a good model of ASI, and a much better model than either  $\log D_{n-{
m octanol/water}}$  or  $\log D_{{
m membrane/water}}$  alone.

## **Experimental Section**

Reagents—1,1-Bis(4-chlorophenyl)-2,2-dichlorethylene) was purchased from Aldrich Chemicals Ltd. Phenytoin, haloperidol, thiopental, imiprimine, and desiprimine were purchased from Sigma Chemicals Ltd. All other compounds were held at Astra Charnwood.

Determination of Capacity Factor on the Immobilized Artificial Membrane Column (IAM)—Membrane affinities were determined from capacity factors from a Regis immobilized artificial membrane (IAM) high performance liquid chromatography column. Capacity factors ( $K_{\text{IAM}}$ ) as determined on the IAM column have been shown to be well-correlated with the partitioning into phospholipid vesicles.

All measurements were carried out at pH 7.4 using disodium orthophosphate/monosodium orthophosphate (Sorensens buffer) at ~0.03 M. All buffers were filtered prior to use, as this was found to be critical to the lifetime of the column. The column used was the 3 cm Regis IAM.PC.DD column fitted with a 1 cm guard column. The flow rate was 1 mL/min and detection was carried out at the  $\lambda_{max}$  of the compound. The concentration of the sample was around 0.25 mg/ mL and the injection volume used was 20  $\mu$ L. The column temperature was maintained at 40 °C, as at ambient temperatures compounds failed to elute from the column. The column performance was monitored with the standards provided from the manufacturer and also using desiprimine. The reproducibility on a day to day basis was very good, with repeat log  $K_{IAM}$  values being determined  $\pm 0.1$ . Small changes in pH and ionic strength did though cause large changes in the retention time, so care was required with mobile phase composition. The column to column variability was found to be acceptable with the variation in log KIAM being around 0.1 unit. The void volume was determined in all cases using citric acid, as recommended by the manufacturer.

Where possible, the capacity factor was determined using only an aqueous mobile phase. However, where the lipophilicity of the compound was too high for it to be eluted under these conditions, an organic modifier was added (acetonitrile, HPLC grade, far UV) to the mobile phase and the retention time determined. A calibration graph of retention time versus percentage of organic modifier was then constructed, and the retention time at 0% organic modifier was determined by extrapolation. For acids and neutral compounds, the plot of retention time versus percentage organic modifier was linear with  $r^2 \sim 0.99$ . In the case of basic compounds, the dependence of retention time on percentage organic modifier was found to be nonlinear. Therefore a purely aqueous mobile phase was used for all bases unless absolutely unavoidable. Amiodarone was the only

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basic compound where the extrapolation technique was used, as the compound could not be eluted with a purely aqueous mobile phase.

The retention time  $(t_r)$  of the compound, together with the retention time of the void volume  $(t_0)$  was used to calculate the capacity factor (K') of the compound using the following equation:

$$K' = \frac{t_r - t_0}{t_0}$$

log P/log D<sub>7.4</sub> and pK<sub>a</sub> Values—The log P and pK<sub>a</sub> data for the compounds used in this work were obtained from the Pomona95 database, which is in the Daylight software marketed by Daylight Chemical Information Systems Inc.<sup>8</sup>

 $\log P$  data was corrected to pH 7.4, where appropriate using the following equations:

for acidic compounds

$$\log D = \log P - \log (1 + \operatorname{antilog}(pH - pK_a))$$

for basic compounds

$$\log D = \log P - \log (1 + \operatorname{antilog}(pK_a - pH))$$

This is an estimate of the expected partitioning into n-octanol at pH 7.4 and assumes that only the neutral form of the compound is the partitioning species and that any ionized form of the drug cannot partition to any significant extent. Although it is well-known that n-octanol can support the partition of ion pairs of ionized compounds with counterions from the buffer solution, or the intramolecular ion pairs of zwitterions, this is considered of little physiological relevance to phopholipid bilayer permeation. P-11 Partitioning of the "bare" charged form alone is of insignificant consequence for acids and bases in n-octanol. 1.12 This is not the case though for partitioning into phospholipid bilayers. 1

HPLC System—A Waters modular system consisting of a 600s controller unit, a 996 photodiode array detector, a 616 pump, a 717 autosampler, and the Millennium software system were used throughout this work.

## Results and Discussion

One common perception is that highly lipophilic drugs tend to show increased storage in adipose tissue. 13,14 This seems a reasonable conclusion, as adipocytes, cells that comprise adipose tissue, are large cells whose intracellular volume is almost completely filled with lipid stored as triglyceride oil. This triglyceride globule behaves like a hydrophobic solvent. Hence, adipose tissue has a high capacity for storage of lipophilic drugs, and it would be expected that n-octanol/water partition coefficients will be a good model of this process. This view is supported by work of Bickel et al., who have found that in vitro drug accumulation in adipose tissue slices does indeed show a good correlation with log P.15,16

It was surprising therefore that drug tissue distribution studies in vivo show no correlation between adipose tissue build-up and lipophilicity.  $^{17.18}$  In vivo it appears the key factor determining the occurrence and extent of adipose tissue storage is the binding competition between adipose tissue, lean tissues, and blood plasma proteins. It was suggested that whereas adipose tissue binding is related mainly to  $\log P$ , blood and lean tissue binding is determined by  $\log P$  and the drugs molecular structure.  $^{18}$ 

Bickel introduced the concept of Adipose Tissue Storage Index, ASI, to quantify tissue distribution of drugs. The ASI was defined as

$$ASI = \frac{C_{\text{ad max}}}{D_{\text{ad max}}}$$

where  $C_{\mathrm{ad\ max}}$  is the maximum concentration in adipose tissue

after a single dose and  $D_{\rm ad\ max}$  is the hypothetical (average) concentration of evenly distributed drug at  $t=t_{\rm ad\ max}$ . This can be calculated from the mass balance of a kinetic distribution experiment, or if elimination is slow, the value can be approximated to t=0. Bickel suggests this is a better descriptor of the extent of adipose storage than the frequently used concentration ratio adipose/plasma ( $C_{\rm ad}/C_{\rm pl}$ ), as drugs that are stored in nonadipose tissues can have very low plasma levels which then result in high  $C_{\rm ad}/C_{\rm pl}$  in the absence of significant adipose storage. The ASI value of a particular drug was found to vary little when calculated from multiple studies or even from different species. ASI values for over 100 drugs have now been reported. 19

In general, lipophilic neutral and acidic compounds show increasing accumulation in adipose tissue with increasing lipophilicity. Many basic drugs, however, show ASI values below unity and are not stored in adipose tissue irrespective of their lipophilicity. It appears that high lean tissue affinity is the main determinant of the low ASI for basic drugs. <sup>18</sup> For example, the distribution of imipramine and other basic drugs is characterized by very high lean tissue/plasma ratios and at the same time low adipose/plasma ratios. <sup>20</sup>

Why should amines show such a high affinity for lean tissue whereas neutral and acidic compounds appear to favor adipose tissue? The key factor, we believe, is the difference in affinity the drug shows for ordered phopholipid over disordered lipid, and the relative proportions of ordered phospholipid to disordered lipid in each tissue. Figure 1 shows photomicrographs of adipose tissue and liver tissue, as a representative of lean tissue. Adipocytes appear to be large cells with almost all their total intracellular space filled with liquid triglyceride. This can be seen in Figure 1, where the intracellular triglyceride globule forces the intracellular components, e.g. the nucleus, to the perimeter of the cell.21 The triglyceride has little ordered structure in vivo and behaves like a hydrophobic liquid. This globule of liquid triglyceride dominates the total lipid composition of the tissue. The highest proportion of lipid in lean tissue is present as phospholipid and glycolipid, which constitute all the external and internal membrane bilayers of the cell. If a compound shows a favorability toward lipid present as a phospholipid bilayer, then we believe it will not build-up in adipose tissue.

The structures for the 17 diverse drugs studied are shown in Figure 2. ASI values for these drugs were taken from the literature  $^{15-20}$  and are shown in Table 1 together with  $\log P$ ,  $pK_u$ ,  $\log D_{n-\cot nolwater}$ , and  $\log K_{\rm IAM}$  values determined. These 17 drugs were chosen for study to be a representative sample of structural types that have determined ASI values. Bickel suggested that ASI could be described by  $\log P$  only for acidic/neutral drugs, but not for amines. Our aim was to derive a unified model that described ASI for all classes of compounds. As the data set contains nine bases and eight acidic/neutral drugs, this selection represented an exacting test for a physicochemical approach that attempts to generate a unified model

The ASI value of a particular drug will not necessarily depend only upon its  $\log D_{n-{\rm octanol/water}}$  or  $\log D_{{\rm membrane/water}}$ . Figures 3, 4, and 5 show the dependence of ASI upon  $\log P$ ,  $\log D_{n-{\rm octanol/water}}$ , and  $\log K_{{\rm IAM}}$ , respectively. Bickel suggests that there is no correlation between ASI and  $\log P$ . This is correct (Figure 3), but there is a significant correlation between ASI and  $\log D_{7.4}$  (Figure 4,  $r^2=0.64$ ). The observed distribution at pH 7.4 takes account of the lipophilicity ( $\log P$ ), the degree of ionization and is the more relevant measure of lipophilicity, when comparing neutral compounds and ionizing compounds of differing pK<sub>a</sub>. There is a weak correlation between ASI and  $\log K_{{\rm IAM}}$  (Figure 5.  $r^2=0.12$ ).

If we assume the ASI essentially models the direct equilibrium between adipose tissue and other body tissues, ignor-

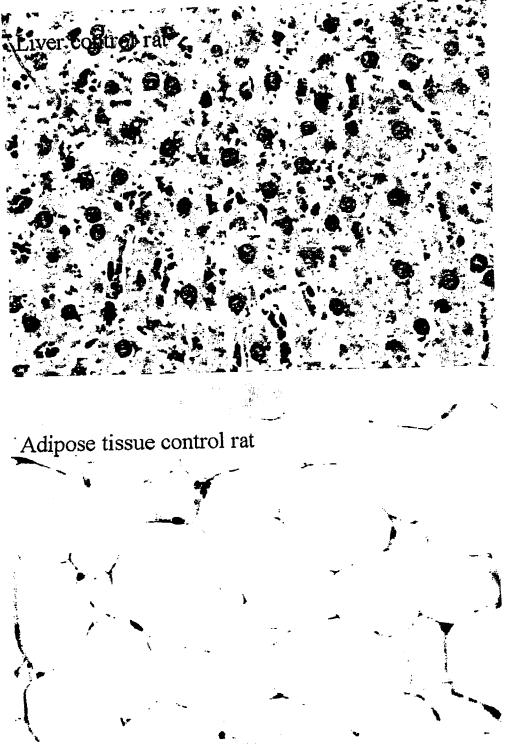


Figure 1—Photomicrographs of rat adipose tissue and rat liver slice. Picture width = 30  $\mu m$ .

ing at present the contribution from blood plasma protein binding, we can model ASI using  $\Delta \log D$  defined as  $\log D_{n-\cot nol water} - \log K_{\rm IAM}$ . This essentially describes the direct equilibrium of the drug between the n-octanol and phopholipid membrane phase. It is a measure of the drugs favorability for n-octanol or the phospholipid membrane. Hence it is essentially an  $in\ vitro$  model of adipose tissue/lean tissue competition for drug described by Bickel and measured by

ASI. The ASI values for these same 17 drugs are plotted against  $\log D_{n-{\rm octane}l {\rm water}} - \log K_{\rm IAM}$  in Figure 6.  $\Delta(\log D)$  is a better model for ASI values ( $r^2=0.83$ ) than either  $\log D_{n-{\rm octane}l {\rm water}}$  ( $r^2=0.64$ ) or  $\log K_{\rm IAM}$  ( $r^2=0.12$ ) alone.

Amiodarone is the only basic compound in this set that shows a high ASI value. Its  $\log D_{n-{\rm octanol/water}} - \log K_{\rm IAM}$  value is consistent with its distribution into adipose tissue, and is not an outlier on Figure 6. Our hypothesis suggests that low

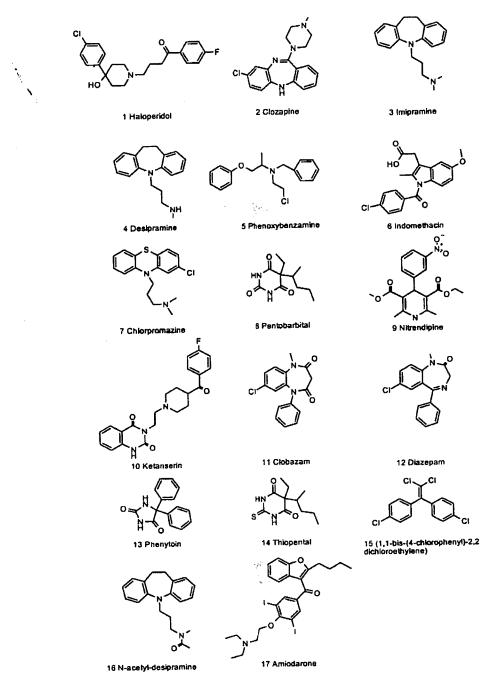


Figure 2-Structures of the 17 diverse drugs studied.

ASI values of amines are due to the higher than expected affinity of basic amines for phospholipid bilayers. This is because the structure of basic amines is complementary to that of the membrane and basic amines can make an extra energetically favorable electrostatic interaction with a phospholipid bilayer. They can partition so as to place their positive charge with the negatively charged phosphate head groups of the membrane and their hydrophobic end with the hydrophobic fatty acyl chains. Neutron diffraction studies have shown that bases such as amlodipine do show such interfacial partitioning.<sup>22</sup> But similar studies show that amiodarone partitions deep into the hydrocarbon core of the bilayer.<sup>23</sup> Our rationalization is that amiodarone's charge and hydrophobicity in its structure do not allow it to make both

electrostatic and hydrophobic interactions with the bilayer, and its partitioning is dominated by hydrophobicity. Early work also suggests that the head group interaction is most favorable for primary basic amines and least favorable for tertiary amines, like amiodarone.<sup>4</sup>

In this study we have not considered the competition for adipose uptake presented by plasma protein binding. The contribution of plasma protein binding to the competition with adipose tissue may explain some of the residual 17% unexplained variation in the correlation shown in Figure 6. Considering that this residual unexplained variation in our correlation also contains the experimental error in determining ASI and other random error, for this dataset, protein binding must make a minor contribution in controlling ASI

Table 1-Adipose Storage Index, Capacity Factors Derived From the IAM Column, and Physicochemical Parameters for 17 Diverse Drugs

No.	Name	ASIª	log D <sub>7.4</sub> b	log P	log Kwu <sup>d</sup>	log D <sub>7.4</sub> - log Kum <sup>e</sup>	p <i>K</i> a′	Nature of Drugg
1	Hatoperidol -	0.1	2.27	4.30	1.71	0.56	8.4	Basic
, ·	Clozapine	0.3	1.04	3.90	1.66	-0.62	7.5	Basic
2		0.3	2.70	4.60	1.44	1.26	9.5	Basic
3	Imipramine \	0.3	1.48	4.00	1,44	0.04	10.2	Basic
4	Desipramine	0.34	2.07	7.00	1.72	0.35	10.3	Basic
5	Phenoxybenzamine	0.4	1.30	3.10	1.05	0.25	4.5	Acidic
- 6	Indomethacin		3.39	5.00	2.06	1.33	9.3	Basic
7	Chlorpromazine	0.5		1.40	1.38	0.02	8.0	Acidic
8	Pentobarbital	1.1	1.40		1.36	-0.39	0.0	Basic
9	Nitrendipine	1.2	0.97	0.97		0.45	9.3	Basic
10	Ketanserine	1.9	1.92	3.01	1.47		5.5	Neutral
11	Clobazam	2.3	1.90	1.90	0.73	1.17		
12	Diazepam	4.6	2.80	2.80	0.98	1.82		Neutral
13	Phenytoin	5	2.50	2.50	0.51	1.99	8.3	Acidic
14	Thiopental	5	2.80	2.80	0.21	2.59	7.5	Acidic
15	(1,1-Bis(4-chlorophenyl)-2,2-dichloroethylene)	7.5	5.90	5.90	1.57	4.33		Neutral
16	N-Acetyldesiprimine	7.8	3.91	3.90	0.79	3.11		Neutral
17	Amiodarone	8.1	5.66	6.70	1.85	3.89	8.4 <sup>h</sup>	Basic

<sup>\*</sup>Adipose tissue storage index.\(^{1-16.\circ}\) log(\(\rho\)-octanol-water distribution coefficient at pH 7.4). \(^{\circ}\) log(\(\rho\)-octanol-water partition coefficient of neutral form). \(^{\dist}\) log(\(\rho\)-octanol-water distribution coefficient at pH 7.4) - log \(\kappa\_{\circ}\). \(^{\dist}\) log(\(\rho\)-octanol-water partition coefficient of neutral form). \(^{\dist}\) log(\(\rho\)-octanol-water distribution coefficient at pH 7.4) - log \(\kappa\_{\circ}\). \(^{\dist}\) log(\(\rho\)-octanol-water partition coefficient of neutral form). \(^{\dist}\) log(\(\rho\)-octanol-water distribution coefficient at pH 7.4) - log \(\kappa\_{\circ}\). \(^{\dist}\) log(\(\rho\)-octanol-water partition coefficient of neutral form). \(^{\dist}\) log(\(\rho\)-octanol-water distribution coefficient at pH 7.4) - log \(\kappa\_{\circ}\). \(^{\dist}\) log(\(\rho\)-octanol-water partition coefficient of neutral form). \(^{\dist}\) log(\(\rho\)-octanol-water partition coefficient of neutral form). \(^{\dist}\) log(\(\rho\)-octanol-water distribution coefficient at pH 7.4) - log \(\kappa\_{\circ}\). \(^{\dist}\) log(\(\rho\)-octanol-water partition coefficient of neutral form). \(^{\dist}\) log(\(\rho\)-octanol-water partition coefficient at pH 7.4) - log \(\kappa\_{\circ}\). \(^{\dist}\) log(\(\rho\)-octanol-water partition coefficient at pH 7.4) - log \(\kappa\_{\circ}\). \(^{\dist}\) log(\(\rho\)-octanol-water partition coefficient at pH 7.4) - log \(\kappa\_{\circ}\) log(\(\rho\)-octanol-water partition coefficient at pH 7.4) - log \(\kappa\_{\circ}\). \(^{\dist}\) log(\(\rho\)-octanol-water partition coefficient at pH 7.4) - log \(\kappa\_{\circ}\) log(\(\rho\)-octanol-water partition coefficient at pH 7.4) - log \(\rho\)-octanol-water partition coefficient at pH 7.4) - log \(\rho\

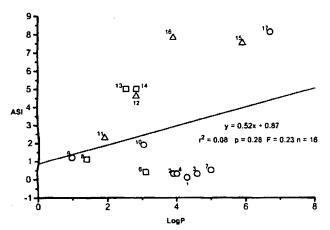


Figure 3—Plot of adipose tissue storage Index (ASI) versus log(n - cctanol/water) partition coefficients for the 17 drugs studied: (O) bases, ( $\Box$ ) acids, ( $\triangle$ ) neutral.

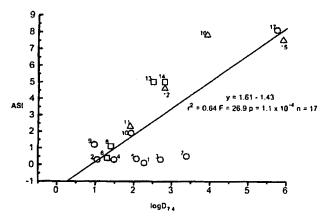
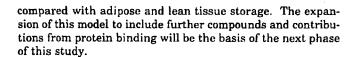


Figure 4—Plot of adipose tissue storage index (ASI) versus log(n-octanot/water) distribution coefficients at pH 7.4,  $log D_{7.4}$ , for the 17 drugs studied. (O) bases, ( $\Box$ ) acids, ( $\triangle$ ) neutral.



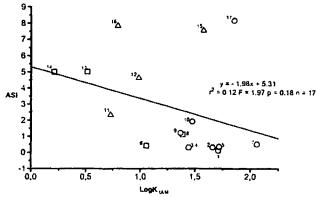


Figure 5—Plot of adipose tissue storage index (ASI) versus  $\log K_{AM}$  determined from IAM column chromatography: (O) bases, ( $\square$ ) acids, ( $\triangle$ ) neutral.

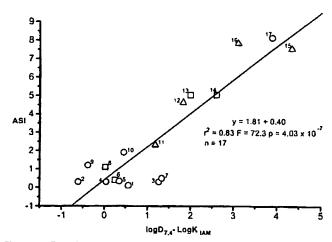


Figure 6—Plot of adipose tissue storage index (ASI) versus  $\Delta(\log D_{7.4} - \log K_{WW})$ : (O) bases, ( $\Box$ ) acids, ( $\Delta$ ) neutral.

The success of this  $\Delta(\log D)$  descriptor in modeling in vivo tissue distribution further supports our view of the importance of drug—membrane interactions in controlling the pharmacokinetic and tissue distribution profile of drugs. As the perfusion of fat tissue is significantly lower than that of organ

tissue or muscle,24,25 differing sites of drug distribution will have a major influence upon the pharmacokinetics of the drug.26

The target of medicinal chemistry is the design of new compounds with the desired pharmacodynamics and pharmacokinetics, with an acceptable safety profile. It is wellaccepted now that medicinal chemists have the tools, (protein target structures, computational chemistry tools, and combinatorial chemistry technologies) and understand the rules that can be applied to optimize potency and selectivity for a particular pharmacological target. It is less well understood how you can design into a drug discovery program controllable pharmacokinetics. Pharmacokinetics in vivo are controlled by absorption and the rates of drug clearance together with the rates and extent of drug distribution. An understanding of structural features controlling drug membrane interactions relative to bulk lipophilicity may take us one step nearer to understanding the molecular features that control drug distribution and hence toward a rational control of in vivo drug pharmacokinetics.

## References and Notes

- Overton, C. E. Studien uber die Narkose, Jugleich ein Betrag zue Allgemeinen Pharmakologie; G. Fischer: Jena, 1901.
- Overton, C. E. Studies in Narcosis; Chapman and Hall: London,
- Leo, A.; Hansch, C.; Elkins, D. Chem. Rev. 1971, 7, 525.
   Austin, R. P.; Davis, A. M.; Manners, C. N. J. Pharm. Sci. 1995, 84, 1180.
- 5. Mason, R. P.; Rhodes, D. G.; Herbette L. G. J. Med. Chem. 1991, 34, 869.
- 6. Smith, D. A.; Jones, B. C.; Walker, D. K. Med. Res. Rev. 1996, 16, 243.
- Pidgeon, C.; Ong, S.; Lui, H.; Qui, X.; Pidgeon, M; Dantizig, A. H.; Munroe, J.; Hornback, W. J.; Kasher, J. S.; Glunz, L.; Szczerba, T. J. Med. Chem. 1995, 38, 590.

- 8. DAYLIGHT Chemical Information Systems Inc., 27401 Los Altos, Suite #370, Mission Viejo, CA 92691.
- 9. Jonkman, J. H. G.; Hunt, C. A. Pharm. Weekblad Sci. Ed. 1983.
- 10. Alcorn, C. J.; Simpson, R. J.; Leahy, D. E.; Peters, T. J. Biochem. Pharmacol. 1993, 45, 1775.
- 11. Chakrabarti, A. C.; Deamer, D. W. Biochim. Biophys. Acta 1992,
- 1111, 171. See, for example, Figure 4 in Davis, M. G.; Manners, C. N; Payling, D. W.; Smith, D. A.; Wilson, C. A. J. Pharm. Sci. 1984,
- 73, 949. 13. Brodie, B. B.; Aronow, L.; Axelrod, J. J. Pharm. Pharmacol. 1957, 9, 345.
- Mark, L. C. Handb. Exp. Pharmacol. 1971, 28, 258.
   Bickel, M.; Clausen, J. J. Pharm. Sci. 1993, 82, 345.
- 16. Di Francesco, C.; Bickel, M. H. Biochem. Pharmacol. 1985, 34, 3683.
- Bickel, M. H. Proc. Int. Symp. Blood Binding Drug Transfer. Off. Satell. 12th Int. Symp. Med. Chem. 1992, 147.
- 18. Bickel, M. H. Prog. Drug Res. 1984, 28, 273.
- 19. Bickel, M. Adv. Drug. Res. 1994, 25, 56.
- 20. Bickel, M. H.; Graber, B. E., Moor, M. Life Sci. 1983, 14, 2025.
- A Textbook of Histology, Bloom, W., Fawcett, D. W., W. B.Saunders Co, Philadelphia, 1975; pp 196-208.
   Mason, R. P.; Moisey, D. M.; Shajenko, L. Mol. Pharmacol. 1992,
- *41*, 315.
- Trumbore, M.; Chester, D. W.; Moring, J.; Rhodes, D.; Herbette, L. G. *Biophys. J.* 1988, 54, 535.
   Dedrick, R. L.; Bischoff, K. B. *Chem. Eng. Prog. Sym. Ser.* 1968,
- Benet, L. Z.; Massoud, N.; Gambertoglio, J. G., (Eds.) Pharma-cokinetic Basis of Drug Treatment, Raven Press: New York, 1984; p 5.
- 26. Bernareggi, A.; Rowland, M. J. Pharmacokinet. Biopharm, 1991,
- Perrin, D. D.; Dempsey, B.; and Serjeant, E. P.; pKa Prediction for Organic Acids and Bases, Chapman and Hall: London, 1981; р 133.

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15. 8

# Simple Method of Calculating Octanol/Water Partition Coefficient

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A simple method of calculating log P (partition coefficient in octanol/water) has been developed based on the quantitative structure-log P relationship for 1230 organic molecules having a wide variety of structures. The 1230 organic compounds investigated included general aliphatic, aromatic, and heterocyclic molecules together with various drugs and agrochemicals. The predictive structure-log P model obtained by multiple regression analysis involved only 13 parameters for hydrophobic atoms, hydrophilic atoms, their proximity effects, unsaturated bonds, amphoteric property, and several specific functionalities. A saturation effect was recognized in the parameters for hydrophobic and hydrophilic atoms, and unsaturated bonds. The structure-log P relationship was highly significant as the F-statistics = 900.4. This simple method appears accurate enough for semiquantitative uses in structure-activity rating studies, especially for quantitative structure-activity relationship in toxicity.

Keywords partition coefficient; octanol/water partition; hydrophobicity; multiple regression analysis; quantitative structure-activity relationship; predictive model

## Introduction

Many diverse biochemical, pharmacological, and toxicological processes involved in drug action are known to be dependent on the hydrophobic property of drug molecules. Parametrization of the hydrophobicity is one of the important aspects in quantitative structure—activity relationship (QSAR) studies. As a parameter for the hydrophobicity, Hansch and Fujita<sup>11</sup> successfully introduced the logarithm of partition coefficient between octanol and water, log P, to regression analysis of biological activities to establish QSAR. Since then, there has been ever-increasing need for prediction of log P for various structures, especially those for which experimental values are not available.

Hansch et al.<sup>2,3)</sup> and Rekker and his colleague<sup>4,5)</sup> empirically calculated log P using some fragment constants and correction terms. Fully computerized systems such as CLOGP<sup>6)</sup> based on the empirical method of Hansch et al. are in widespread use. The computerized empirical methods work well for a number of compounds; however, difficulties have sometimes arisen in decomposing the structure into appropriate fragments whose constants are available.

For compounds having simple structures, more sophisticated methods of estimating log P were proposed by Rogers and Cammarata.<sup>7)</sup> Hopfinger and Battershell,<sup>8)</sup> Klopman and Iroff,<sup>9)</sup> Iwase et al.,<sup>10)</sup> Kasai et al.,<sup>11)</sup> and Sasaki et al.,<sup>12)</sup> Although these methods may be theoretically interesting, they do not seem practically applicable to complex structures of drugs and agrochemicals.

Recently, QSAR's in toxicity for large sets of data have been studied and their use attempted by regulatory agencies and industry to screen compounds for possible health and environmental hazards. For this purpose, a simple method of calculating log P for any type of molecule is strongly desired. Since such toxicity data are generally collected from many different sources, observed potencies are usually classified into several ratings and treated semiquantitatively.

In this study, we have attempted to develop a simple method of approximating log P for organic molecules of diverse and complex structures. The method is based on the structure-log P relationship obtained from the multiple regression analysis (MRA) of 1230 organic molecules including general aliphatic, aromatic, and heterocyclic

compounds together with complex drugs and agrochemicals. The predictive structure-log *P* model involves only 13 structural parameters, and appears accurate enough for semiquantitative use in structure-activity studies.

#### Method

Compounds and log P Data for MRA The 1230 compounds used for the structure-log P relationship analysis have diverse structures including C. H. N. O. S. P. F. Cl. Br. and/or I atoms listed in Table 1. Their observed log P values were cited from the literature.<sup>33</sup>

Structural Parameters for Multiple Regression Models Parameters for hydrophobic atoms, hydrophilic atoms, their proximity effects, unsaturated bonds, intramolecular hydrogen bonds, ring structures, amphoteric property, and several specific functionalities were used and are listed in Table II. For three of these parameters, CX, NO, and UB, their saturation effects were investigated using nonlinear forms,  $(CX)^n$ ,  $(NO)^n$ , and  $(UB)^n$   $(0.5 \le a < 1.0)$  as well as the original parameters. CX is the summation of weighted numbers of carbon and halogen atoms, and the weight values were taken to be simple but approximately proportional to the van der Waals volume of atomic spheres, since the van der Waals volume is well correlated with hydrophobicity for apolar structures. <sup>131</sup> For POL, the upper value was limited to 4.0, since, with this limitation, the contribution to the regression with  $\log P$  was found to be best. Other values for estimation of parameters such as those of PRX, IIB, AMP, QN, and NCS were also empirically evaluated.

Calculation All calculations were carried out on a Sony NWS-830 computer and a Kobe Steel KTR-BO8 transputer attached to an Epson PC-286VF microcomputer using a self-written MRA program.

### Results and Discussion

Multiple Regression Studies Using 1230 log P Data It is generally thought that log P of a molecule can be estimated from the contribution of its hydrophobic and hydrophil-

TABLE 1. Composition of Compounds for Multiple Regression Analysis

Atom	Number	Compound with the max. number of the atom
C	1-24	Triamcinolone acetonide
H	U34	Prostaglandin E-1
N	0 5	2.4-Diamino-6-dimethylaminopyrimidine-3-oxide
0	0 7	Sulbenicillin
S	0 2	Sulbenicillin, etc.
P	0 I	Parathion, etc.
F	0 7	2,2,3,3,4,4,4-Heptafluorobutanol
Cl	0 - 6	BHC, etc.
Br	0 — 3	2-(2,4,6-Tribromophenoxy)ethanol
1	0— 1	5-lodo-uracil. etc.

TABLE II. Parameters Used

Parameter	Type	Description
CX	N	Summation of numbers of carbon and halogen atoms weighted by C: 1.0, F: 0.5, Cl: 1.0, Br: 1.5, and 1: 2.0
NO	N	Total number of N and O atoms
PRX	N	Proximity effect of N/O; $X-Y: 2.0, X-A-Y: 1.0$ (X, Y: N/O, A: C, S, or P) with a correction (-1) for carboxamide/sulfonamide
UB	N	Total number of unsaturated bonds except those in NO <sub>2</sub>
ĦΒ	D	Dummy variable for the presence of intramolecular hydrogen bond as ortho-OH and -CO-R, -OH and -NH <sub>2</sub> , -NH <sub>2</sub> and COOH, or 8-OH/NH <sub>2</sub> in quinoxalines, etc.
POL	N	Number of aromatic polar substituents (aromatic substituents excluding Ar-CX <sub>2</sub> - and Ar-CX = C<, X; C or H)
AMP	N	Amphoteric property; z-aminoacid: 1.0, aminobenzoic acid: 0.5, pyridinecarboxylic acid: 0.5
ALK	D	Dummy variable for alkane, alkene, cycloalkane, or cycloalkene (hydrocarbons with 0 or 1 double bond)
RNG	D	Dummy variable for the presence of ring structures except benzene and its condenced rings (aromatic, heteroaromatic, and hydrocarbon rings)
QN	N	Quaternary nitrogen: > N < 1.0; N oxide, 0.5
NO2	N	Number of nitro groups
NCS		Isothiocyanato $(-N = C = S)$ , 1.0; thiocyanato $(-S - C \equiv N)$ , 0.5
BLM	D	Dummy variable for the presence of $\beta$ -lactam

a) N, numerical variable; D, dummy variable

ic substructures. As basic parameters, we used CX, the summation of empirically weighted numbers of carbon and halogen atoms for primary contribution of hydrophobic atoms, and NO, the total number of nitrogen and oxygen atoms for primary contribution of hydrophilic atoms, for MRA of 1230  $\log P$  data. The resultant two-parameter equation is shown as Eq. 1,

$$\log P = 0.246CX - 0.386NO + 0.466$$

$$(t = 32.0) \quad (t = 25.6)$$

n = 1230, r = 0.730, s = 0.912,  $F_0(2,1227) = 700.3$ 

where t = t-statistics for the coefficient, n = number of compounds, s = standard deviation of the estimation error, and  $F_0 = F$ -statistics for the correlation. The equation, showing a positive contribution of CX and a negative contribution of NO to  $\log P$ , is entirely consistent with the general image of the  $\log P$  model.

The contributions of CX and NO to log P were considered not simply linear but, instead, there seemed to be a saturation with greater values of CX and NO. So, the saturation effect was investigated using nonlinear forms of the parameters,  $(CX)^a$  and  $(NO)^a$   $(0.5 \le a < 1.0)$ , and the following equation with an improved correlation  $(F_0 = 810.7)$  was derived.

$$\log P = 1.001(CX)^{0.6} - 0.479(NO)^{0.9} + 0.754$$
(1 = 34.5) (1 = 27.2)

n = 1230, r = 0.754, s = 0.876,  $F_0(2,1227) = 810.7$ 

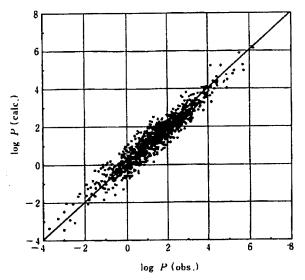


Fig. 1. Correlation between Observed  $\log P$  and Calculated  $\log P$  from Eq. 4 for 1230 Compounds

The proximity effect of nitrogen and/or oxygen atoms was also considered important as a correction for the electronic structure. Incorporating an empirical parameter for proximity, *PRX*, into Eq. 2 resulted in a remarkable improvement in the correlations as shown in Eq. 3.

$$\log P = 1.241(CX)^{0.6} - 1.071(NO)^{0.9} + 0.463PRX - 1.155$$

$$(t = 49.6) \qquad (t = 40.1) \qquad (t = 26.1)$$
(3)

n = 1230, r = 0.850, s = 0.703,  $F_0(3.1226) = 1067.6$ 

In this equation, F-statistic is very high, but the s value is not low enough for practical use. The effects of various substructures of molecules were therefore further investigated for addition to Eq. 3 using parameters such as those listed in Table II. Finally, we obtained the following requation with 13 simple parameters using MRA for the entire set of 1230 compounds.

$$\log P = 1.244 (CX)^{0.6} - 1.017 (NO)^{0.9} + 0.406 PRX$$

$$(t = 60.5) \qquad (t = 58.5) \qquad (t = 33.8)$$

$$-0.145 (UB)^{0.8} + 0.511 HB + 0.268 POL - 2.215 AMP$$

$$(t = 9.5) \qquad (t = 5.9) \qquad (t = 19.6) \qquad (t = 19.5)$$

$$+0.912 ALK - 0.392 RNG - 3.684 QN + 0.474 NO2$$

$$(t = 9.5) \qquad (t = 13.1) \qquad (t = 22.1) \qquad (t = 10.8)$$

$$+1.582 NCS + 0.773 BLM - 1.041$$

$$(t = 16.4) \qquad (t = 5.0)$$

$$n = 1230, \quad r = 0.952, \quad s = 0.411, \quad F_0(13.1216) = 900.4$$

The squared correlation matrix for the parameters included in Eq. 4 is listed in Table III. There seemed tobe no possibility of chance correlation from this matrix and the *t*-values for regression coefficients given in Eq. 4.

The relation of log P values calculated using Eq. 4 and the corresponding experimental values is drawn in Fig. 1. This shows a good fit, in spite of a large number of diverse molecules and a small number of straightforward parameters. In Eq. 4, the values of the t-statistics indicate that the parameters for hydrophobic and hydrophilic atoms.  $(CX)^{0.6}$  and  $(NO)^{0.9}$ , provide dominant contributions as

TABLE III. Squared Cross-Correlation Matrix of Parameters Used in Eq. 4

							` <del></del>						
	$(CX)^{0.6}$	$(NO)^{0.9}$ .	PRX	$(UB)^{0.8}$	<i>HB</i>	POL	AMP	ALK	RNG	QN	NO2	NCS	BLM
(CX)0.6	1.00												
$(NO)^{0.9}$	0.20	1.00											
PRX	0.04	0.82	1.00										
$(UB)^{0.8}$	0.71	0.37	0.19	1.00									
HB	0.07	0.11	- 0.05	0.11	1.00								
POL	0.36	0.36	0.25	0.51	0.16	1.00							
AMP	-0.03	0.08	0.04	0.00	0.09	0.05	1.00						
ALK	-0.15	-0.20	-0.10	-0.21	-0.02	-0.12	-0.02	1.00					
RNG	0.07	0.26	0.17	0.04	-0.05	- 0.09	-0.03	- 0.02	1.00				
QN	-0.03	0.02	0.05	0.00	-0.01	0.00	-0.01	-0.01	0.09	1.00			
NO2	0.05	0.42	0.58	0.04	-0.04	0.21	-0.03	- 0.04	-0.12	-0.01	1.00		
NCS	0.06	-0.06	-0.07	0.16	~ 0.02	0.03	-0.02	-0.02	-0.07	-0.01	-0.01	1.00	
BLM	0.41	0.24	0.05	-0.06	0.05	-0.14	0.00	-0.01	0.26	0.00	- 0.09	-0.05	1.0

t=60.5 and 58.5, respectively. In this and other respects, Eq. 4 seems a reasonable model for structure-log P relationship. Further, the value of s indicates that the estimation of log P using this simple equation is accurate enough for semiquantitative uses in structure-activity rating studies.

Four examples are shown below to illustrate the calculation of log P using this method. For comparison, log P values calculated by CLOGP are also listed. The first two are examples giving results of reasonable accuracy. Examples 3 and 4 give rather poor accuracy, possibly owing to electronic and topological properties peculiar to some lactone and fused ring structures. Our simple method does not cope effectively with such special cases, however, this shortcoming appears common to CLOGP.

Ex. 1. Halothane 
$$CI = C_2 + C_2 + C_3 + C_4 +$$

 $CX = 1.0 \times 16$  (for  $C_{16}$ ) = 16.0

NO = 7.0 (for  $N_3O_4$ )

 $PRX = 1.0 \text{ (for -CO-NH-)} + 1.0 \text{ (for CO-N\zeta)} + 2.0 \text{ (for -CO-OH)}$ = 4.0

UB = 6.0 (for 6 double bonds)

RNG = 1.0 (for ring)

BLM = 1.0 (for  $\beta$ -lactam)

$$\log P = 1.244 \times (16.0)^{0.6} - 1.017 \times (7.0)^{0.9} + 0.406 \times 4.0$$
$$-0.145 \times (6.0)^{0.8} - 0.392 \times 1.0 + 0.773 \times 1.0 - 1.041$$
$$= 1.06$$

measured = 1.35; Calcd (CLOGP) = 1.00141

Ex. 3. 
$$\delta$$
-Valerolactone  $C_5H_8O_2$ 

$$CX = 5.0 \text{ (for } C_5)$$

NO = 2.0 (for  $O_2$ )

PRX = 2.0 (for -CO-O-)

UB = 1.0 (for a double bond)

RNG = 1.0 (for ring)

$$\log P = 1.244 \times (5.0)^{0.6} - 1.017 \times (2.0)^{0.9} + 0.406 \times 2.0$$
$$-0.145 \times (1.0)^{0.8} - 0.392 \times 1.0 - 1.041$$
$$= 0.60$$

measured = -0.35; Calcd (CLOGP) =  $0.66^{14}$ )

EX. 4. Oxazepam Cl 
$$\longrightarrow$$
 OH  $C_{15}H_{11}ClN_2O_2$ 

$$CX = 1.0 \times 15$$
 (for  $C_{15}$ ) + 1.0 × 1 (for Cl) = 16.0

NO = 4.0 (for  $N_2O_2$ )

$$PRX = 1.0 \text{ (for -NH-CO )} + 2.0 \text{ (for = N-C-OH)} = 3.0$$

UB = 8.0 (for 8 double bonds)

$$POL = 4.0$$
 (for Ph-Cl, Ph-NH-,  $2 \times Ph - \stackrel{!}{C} = N-$ )

RNG = 1.0 (for ring)

$$\log P = 1.244 \times (16.0)^{0.6} - 1.017 \times (4.0)^{0.9} + 0.406 \times 3.0$$
$$-0.145 \times (8.0)^{0.8} + 0.268 \times 4.0 - 0.392 \times 1.0 - 1.041$$
$$-3.12$$

measured = 2.25; Calcd (CLOGP) =  $3.33^{14}$ 

Comparison of the Present Method with Other Studies In a similar study with less diverse structures, Klopman et al. 151 reported simple correlation models for calculating log P. They studied a set of 195 general organic molecules including C, H, N. O, and/or Cl atoms. The fit for the 195 compounds using seven or nine parameters was almost as good, with a correlation coefficient of r = 0.962 and 0.974, respectively. The seven descriptors were the number of carbon, hydrogen, nitrogen, oxygen, and chlorine atoms and the number of acid/ester and nitro functional groups. The additional two descriptors were the number of methylene or methyl substituents attached to a phenyl ring and a descriptor to indicate the aliphatic hydrocarbons from the rest.

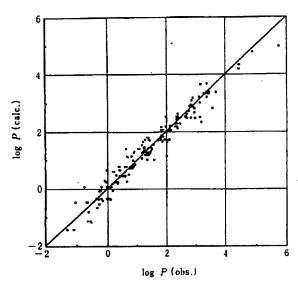


Fig. 2. Correlation between Observed  $\log P$  and Calculated  $\log P$  from Eq. 5 for 195 Compounds

For comparison, we investigated the structure- $\log P$  relationship for the same set of compounds using the 13 parameters appearing in Eq. 4 as candidate descriptors. The resultant equation was as follows:

$$\log P = 1.464(CX)^{0.6} - 1.221(NO)^{0.9} \times 0.653PRX$$

$$(t = 31.6) \qquad (t = 27.1) \qquad (t = 21.9)$$

$$-0.300(UB)^{0.8} + 0.335POL + 0.726ALK$$

$$(t = 10.0) \qquad (t = 9.4) \qquad (t = 5.8)$$

$$-0.269RNG - 1.358$$

$$(t = 3.8)$$

$$n = 195, \quad r = 0.975, \quad s = 0.290, \quad F_0(7.187) = 512.2$$

Seven parameters sufficed to describe the relationship, since molecular structures of the 195 compounds were rather simple compared with those of the 1230 molecules. The high correlation is shown in Fig. 2, indicating a good fit.

In conclusion, our new procedure gives comparatively better results in the estimation of log P for diverse structures. The method is very simple and applicable to almost any type of organic molecules, although it is not precise enough to differentiate log P among geometrical isomers. It is hoped that the present method will be widely used for structure-activity rating studies, especially for QSAR in toxicity.

## References

(5)

- 1) C. Hansch and T. Fujita, J. Am. Chem. Soc., 86, 1616 (1964).
- 2) A. Leo, C. Hansch, and D. Elkins, Chem. Rev., 71, 525 (1971).
- C. Hansch and A. Leo, "Substituent Constants for Correlation Analysis in Chemistry and Biology," John Wiley and Sons, New York, 1979.
- 4) G. G. Nys and R. F. Rekker, Chim. Therap., 8, 521 (1973).
- R. F. Rekker, "The Hydrophobic Fragmental Constant," Elsevier, Amsterdam, 1977.
- MEDCHEM Software, Daylight Chemical Information Systems, 3591, Claremont St., Irvine, CA 92714, U.S.A.
- K. S. Rogers and A. Cammarata, Biochim. Biophys. Acta, 193, 22 (1969).
- A. J. Hopfinger and R. D. Battershell, J. Med. Chem., 19, 569 (1976).
   G. Klopman and L. Iroff, J. Comput. Chem., 2, 157 (1981).
- 10) K. Iwase, K. Komatsu, S. Hirono, S. Nakagawa, and I. Moriguchi,
- Chem. Pharm. Bull., 33, 2114 (1985).
- K. Kasai, H. Umeyama, and A. Tomonaga, Bull. Chem. Soc. Jpn., 61, 2701 (1988).
- Y. Sasaki, H. Kubodera, T. Matsuzaki, and H. Umeyama, J. Pharmacobio-Dyn., 14, 207 (1991).
- I. Moriguchi, Y. Kanada, and K. Komatsu, Chem. Pharm. Bull., 24, 1799 (1976).
- 14) A. J. Leo, "Comprehensive Medicinal Chemistry," Vol. 4, ed. by C. Hansch, Pergamon Press, 1990, pp. 295—319.
- G. Klopman, K. Namboodiri, and M. Schochet, J. Comput. Chem., 6, 28 (1985).